Air Conditioning Showcase Issue with 'Specs' . . . . . Next Week

AIR CONDITIONING HEATING & REFRIGERATION NEWS

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'Show In Print' Issue

In this "Show In Print" issue, the NEWS presents the first comprehensive news report on the 15th International Heating & Air Conditioning Exposition, and meetings of the American Society of Heating, Refrigerating & Air-Conditioning Engineers, and the Air Conditioning & Refrigeration Wholesalers. There will be more coverage of the Exposition and the meetings in subsequent issues, but this issue highlights many of the product innovations at the Show, and presents the news from the meetings.

Pictures of products exhibited at the Show will be found throughout the latter part of the issue. News reports on the meetings start on page 1 and continue inside.

At the Exposition

Record Crowds Reflect Field's Optimism About Prospects for New Product Lines Displayed

By Phil B. Redeker

CHICAGO—Blessed with the most Spring-like February weather Chicago has experienced in memory, and hosting the largest exhibit of heating and air conditioning products in the industry's history, the 15th International Heating & Air Conditioning Exposition drew some 25,000 individuals who manufacture, sell, install, and service equipment — an event which many interpret as a remarkable display of confidence in the industry's immediate and long-range future.

Some 3,000 of those attending were members of the American Society of Heating, Refrigerating & Air-Conditioning Engineers, which sponsors the exposition. ASHRAE officials hailed the exposition, and its annual meeting held concurrently, as the best attended and most successful in the history of the society.

The exposition opened while Secretary of Labor Arthur Goldberg was making his tour of the country announcing that the country is in the throes of a serious depression. While there is hardly any producer or installer who would claim that the amount of business currently being done is close to desirable goals, there is little thought given to the idea of a deep recession.

"In fact," said the sales manager for commercial packaged air conditioners of a leading producer, "our distributor sales in January were above the '59 level, and not too far behind those in the same month in 1960, when they were very good. Only in the last week or so when Washington has been

(Continued on Page 6, Col. 1)

ARW Seeks Answer on Direct Selling Problem; Continues 'New Look' Moves

By Phil B. Redeker and Frank J. Versagi

CHICAGO—In one of its most active conventions, the Air Conditioning & Refrigeration Wholesalers association in its annual convention took steps to find a solution to the problem of wholesaling of parts intended for use on manufactured end products; made recommendations for constitutional changes, and gave consideration to a program promoting the services of ARW wholesalers.

Elected as ARW president for the coming year is E. Peter Sorensen, Airo Supply Co., Chicago; E. H. Davey, Davey Sales, Akron, is vice president; Paul Bodwell, The Bodwell Co., Harrisburg, Pa., secretary; and E. S. Diggle, Henry V. Dick & Co., Columbia, S. C., treasurer. John Sheperdson, Standard Supply, Inc., Worcester, Mass., was elected director for ARW Region 1. Diggle was re-elected director for Region 4, and Paul Cato, Tersco, Ft. Worth, was re-elected to serve as director from Region 8.

In panel sessions the members wrestled with problems of selling industrial accounts, automating accounting procedures, and selecting and using various advertising methods. (A more detailed report on the panel discussions will be found later in this story).

On the question of the "O.E.M. for Resale Problem" the supplies wholesalers heard a report from A. A. Sommer,

(Continued on Page 29, Col. 3)

Accuse 'No-Pay' Builder

DETROIT—A warrant issued recently accused a local builder of failing to pay a plumbing subcontractor $1,458 for work done on a new home.

(Continued on Page 9, Col. 1)

Research Setup In Spotlight at ASHRAE Session

By C. Dale Mericle

CHICAGO — Board of directors of the American Society of Heating, Refrigerating & Air-Conditioning Engineers denied by a heavy majority a petition requesting a referendum vote by members on the board's recent decision to close the society's laboratory in Cleveland.

Petitions which had been circulated during the semiannual meeting of ASHRAE here Feb. 13-16 and signed by about 150 persons were presented for the board's consideration at its regular meeting Thursday afternoon, Feb. 16.

Letters explaining the board's action are being sent to the individual petitioners by R. H. Tull, newly-elected president of ASHRAE.

During the Research and Technical symposium President Tull had gone to the rostrum to tell the group that the question of continuing the laboratory had been "under study long before the merger" (of ASRE and ASHVE).

(Continued on Back Page, Col. 1)

Mueller Climatrol Bows Extensive New Lines for '61

CHICAGO—Mueller Climatrol Div. of Worthington Corp. has announced "extensive and complete" lines of new products for 1961.

They include a new electric heating and air conditioning family of products, two new hydronic lines, and a new warm air heating line.

The company gave this rundown on the new products:

New remote condensing unit —926—designed in 3, 4, and 5-ton nominal capacities "for economical installation of summer cooling even in the mass new home market.

"A new propeller fan motor mounting, which also uses neoprene vibration eliminators, provides a low level of operating sounds. To further insure quiet operation, motors are of a slower speed. The 926 uses 850 rpm motors compared to

(Continued on Page 4, Col. 1)

Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Conrad Tyrannosaurus

Like the Tyrannosaurus and the Conrad Hilton hotel, the ASHRAE exposition has grown so big that it's unwieldy.

Too many exhibits, too many people, too many meetings. Some exhibitors complained, too, that some other exhibitors were overspending in a "steal the show" ratrace which nobody can win.

Outside of these beefs, it was a highly successful show. And the preponderance of exhibitors and the attendees were surprisingly optimistic about 1961 business prospects.

Consensus of opinion was that we will enjoy a terrific second quarter and continue upward through the year.

Miles and Miles of Copper Tubing

Speaking of the Conrad Hilton hotel, there are 116,160 feet of copper tubing in its air conditioning system!

(John Dumser should love that.)

This system neatly air conditions 2,600 rooms—plus a slew of halls, restaurants, ballrooms, and the biggest night club in the city.

You could spend seven years in this dinosauric hostelry, and sleep in a different room every night. (No cracks, please.)

Especially notable at this 15th International Heating and Air Conditioning Exposition

(Continued on Page 10, Col. 1)

Curtis Develops Roof-Top Unit

ST. LOUIS — A completely self-contained roof-top cooling unit and a combined heating and cooling unit for offices, stores, and other single level commercial buildings have been developed by Curtis Mfg. Co. here.

The cooling system is available as a separate unit while the year-round temperature control system is a three-part package consisting of an air-cooled condenser unit, a cooling section, and a gas-fired unit for heating.

Models are available in 7½ and 10-ton sizes. Over-all dimen-

(Continued on Back Page, Col. 4)

FREEZE-DRYING— A Threat to Commercial Refrigeration?

— A NEWS Editorial —

Freeze-drying first became practically significant during World War II, when the technique made possible the preservation of large amounts of blood plasma.

Then freeze-drying became important in the manufacture of pharmaceuticals.

Now the technique is being hailed as a major breakthrough in food preservation. Preliminary findings indicate that the process makes it possible to store fresh food indefinitely, anyplace, without refrigeration. Foods dehydrated in this manner weigh considerably less than fresh food and take up less space. Transport of food ceases to be a problem because it is only necessary to seal the dried foods in plastic or metal.

(Continued on page 16)

All Novi Operations Discontinued; New Financing Sought by President

LOS ANGELES — All operations of Novi Equipment Co., Novi Sales & Service Co., and Novi Diesel Engine, Inc., have been discontinued, according to a bulletin issued by the Adjustment Bureau, Credit Managers Association of Southern California.

However, Lewis M. Welch, president of the firms, hopes to be able to resume the manufacture and sale of Novi automobile air conditioners and a small-sized, lightweight diesel engine which has been under development, the bulletin said.

In the bulletin, M. W. Engleman, bureau manager, reported on results of a general meeting of creditors of the "Novi" organizations.

Welch told creditors of his plans looking towards the obtaining of new capital through loan arrangements and through relinquishment of certain of his interests in the corporations, it was pointed out. He also advised that negotiations for new financing arrangements were under discussion with several groups.

Welch asked creditors, the bulletin said, to grant a 60 to 90-day moratorium to enable him to pursue the negotiations for financing.

"Creditors felt that nothing could be accomplished otherwise,'" Engleman stated, "and accordingly, a resolution was adopted unanimously calling for the appointment of a group of three of the creditors to act as an advisory group to the creditors in cooperation with this office, and the resolution further provided that it be recommended that creditors withhold demands upon their claims pending further developments."

Members of this advisory group are George Kovacs, General Machine Tool Co.; Jack A. Cooley, Earle M. Jorgensen Co.; Harry I. Sky, attorney, representing Great Lakes Lumber & Supply Co., and Leonard Jarosz.

Bill Would Halve Room Unit Excise Tax

WASHINGTON, D. C. — A bill which would reduce the Federal manufacturers' excise tax on room air conditioners from 10% to 5% has been introduced by Rep. Eugene Keogh (D., N.Y.), fourth ranking majority member of the House Ways & Means Committee.

A similar bill he sponsored in the 86th Congress died in committee when the Congress adjourned last September.

Lutes Heads New Vilter Office In Los Angeles

MILWAUKEE — The Vilter Mfg. Co. has announced the expansion of its sales force with the opening of a new sales office in Los Angeles to more effectively serve its California customers.

J. M. Lutes

Joseph M. Lutes has been named district manager of the new office, and will direct the sale of Vilter refrigeration, air conditioning, and heat transfer equipment throughout California, Arizona, and Nevada.

Prior to this appointment, Lutes had been vice president and general manager of Refrigeration Machinery Corp., Los Angeles.

Atlanta Firms To Hear About Silver Shield

CLEVELAND — Heating and air conditioning dealer-contractors in the Greater Atlanta marketing area will meet at the new Georgia Power Co. auditorium Tuesday evening, Feb. 28, to hear the story of the Silver Shield program developed by the National Warm Air Heating & Air Conditioning Association here.

Similar meetings were held recently in Burlington, N. C., and Kansas City, Mo.

Cooperating with the national association in planning the Atlanta meeting is an Action Committee consisting of Laurence F. Kent, vice president and general manager of Moncrief Furnace Co.; N. B. Estes, Estes Heating & Air Conditioning Co., Mt. View; John Reid, Home Heating & Air Conditioning A. M. Ivey, Ivey Heating & Air Conditioning Co., Chamblee; and William C. Shreve, Randall Brothers.

Working with NWAHACA on the Burlington-area meeting, held Feb. 13 at Duke Power Co., was an Activity Committee Consisting of Wayne Mooneyham, Burlington Heating & Air Conditioning Co., and J. Orville Garrett, vice president and general manager of Garrett Wholesale Distributors Co., Greensboro.

The Kansas City meeting was held Feb. 9 at the South Sales Office of Gas Service Co. The Silver Shield Action Committee there consists of:

Dealer - Contractors: Herbert Haase, Blue Valley Heating & Air Conditioning; Charles Doubleday, Doubleday Heating Co. (also president of the Sheet Metal & Heating Contractors Association of Kansas City); Clem Alexander, Johnson Furnace Co.; Ed Fox, Fox Furnace Co.; Jim Dukelow, Trough-Nichols, Inc. (also president of the Sheet Metal & Air Conditioning Contractors Association of Greater Kansas City).

Wholesalers: Floyd Doubleday, Furnace Supply Co.; Clarence Schumacher, General Heating & Cooling.

Utilities: (gas) Paul E. Chamberlin, The Gas Service Co.; (electric) Clark Anderson, Kansas City Power & Light Co.

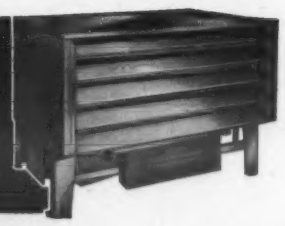
Ralph A. Nicholas, executive secretary, Sheet Metal & Air Conditioning Contractors Association of Greater Kansas City.

R & D Association Plans Open Conference

HIGH POINT, N. C. — An open conference for air conditioning, heating, plumbing, refrigeration, and sheet metal dealer-contractors will be held in connection with the annual convention of the Heating and Air Conditioning Research and Development Association, announces Dr. E. A. Fails, executive secretary.

The convention is scheduled for the Sheraton hotel here, starting Thursday evening, March 16, and winding up at noon Saturday, March 18.

THROW YOUR COMPRESSOR *OUT!



*OUTSIDE, THAT IS!

KRAMER'S outdoor compressor is the only compressor designed to operate outdoors for any application under all temperatures and weather conditions.

Completely assembled, wired, tested and factory run-in, it arrives on the job ready to operate. Simple hookup eliminates costly installation and control adjustment time. Kramer's outdoor compressor ends waste of valuable indoor space.

WRITE FOR BULLETIN

KRAMER

OUTDOOR COMPRESSOR

KRAMER TRENTON CO. • Trenton 5, N. J.

46 YEARS OF CONTINUOUS ACHIEVEMENT IN HEAT TRANSFER

These shoes get around...they have to!

Lau maintains the largest warehousing and inventory operation in the blower industry. For this warehouse expert to ship a quantity of any size and type blowers immediately, he must really know his job. Like his counterparts at Lau factory warehouses in California and Canada, he does know his job—and he knows it well. For immediate, dependable delivery from a location *near you,* write or call Lau today.

The Lau Blower Company • Dayton, Ohio

Mueller Climatrol--

(Continued from Page 1, Col. 1)

previous units which operated at 1,075 rpm.

"These features and other design improvements make this propeller fan unit almost equal the quiet operation normally found only in centrifugal blower condensing units."

New air handling coil unit—type 939—This line of blower-coil units is designed for use with a remote air conditioning system and is now available in 2, 3, 4, and 5-ton nominal sizes.

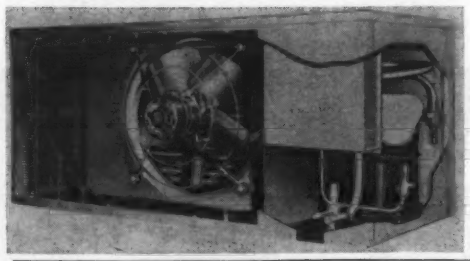
"Any 939 unit can be used as an upflow, counterflow, or horizontal when installed. In addition to the versatility of the installation, a great number of air flow patterns can be obtained within these applications. The 939 is finished in a two-tone green, which is set-off by a bright metal strip."

New indoor heat pump assembly—type 339—now available in 3 and 5-ton nominal capacities, for use in remote heat pump systems.

"As in the 939 line, each 339 unit can be used in upflow, counterflow, or horizontal installations. A wide choice of air flow patterns are also available within any of the installations. A bright metal strip accents the two-tone green appearance.

Supplementary electric resistance heating packages — type 301 — designed for use with heat pump systems—in 20,000, 30,000, 40,000, and 60,000 Btuh capacities. Appearance of the 301 was designed to complement the 339 heat pump assembly.

New electric furnace — type 329—Similar in design to the 339 and 939 lines, this furnace can be used in upflow, counterflow, and horizontal installations. Here, too, a variety of air flow patterns can be obtained in any of these installations.



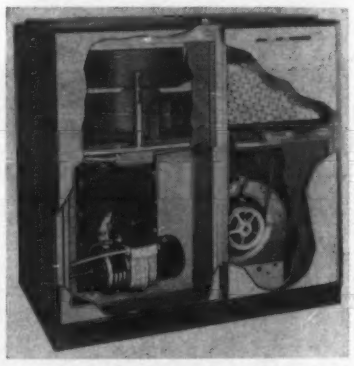
CUTAWAY view of Mueller Climatrol 926 remote condensing unit.

The 329 Electric Furnace will be available by mid-1961, in basic unit capacities of 41,000, 61,500, and 82,000 Btuh. All units can be de-rated on location or at the factory to suit individual home heating requirements. Summer air conditioning in 2 and 3-ton (nominal) packages can be added at the time of installation or later.

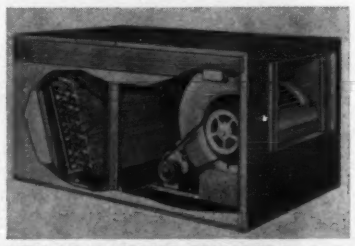
Gas-fired boilers—type 22—Now available in sizes ranging from a three-section 150,000 Btu/input, to a ten-section 675,000 Btu/input. A heavy gauge steel casing completely encloses all operating controls. The casing is finished in a two-tone green. Tankless coils are available for all models.

Gas-fired package boilers — type 14—By mid-1961, type 14 boilers, which are "extremely compact," will be available in capacities ranging from 60,000 to 270,000 Btu/inputs.

The 60,000 Btu model will require only 2 sq ft of floor space and stand only 33 in. high. Models will also be available for steam, gravity hot water, and forced hot water.



MUELLER CLIMATROL model 219 oil-fired furnace.



NEW AIR HANDLING COIL UNIT for horizontal installations.

Mueller Climatrol also announced new higher capacities for the 144/145 gas-fired "Suburbanaire" line to include capacities of 150,000 Btu/input and 200,000 Btu/input, and a new gas-fired counterflow Suburbanaire line, designated to complement the 144/145 series of upflow highboys. The new 142/143 series are now available in the capacities of 75,000 to 125,000 Btuh.

In addition, Mueller Climatrol announced the production of "one line of winter air conditioners which will meet the demands for both economy and deluxe installations.

"The basic heating unit without the deluxe options will be highly competitive in the mass new home market," the division said. "The furnace with options gives complete year-round climate control for the deluxe custom home and modernization markets. The deluxe options also can easily be added in the field at any time.

"As standard equipment, the new 119/219 heating line will include large capacity blowers with special blower mounts to reduce operation sound levels.

"All gas-fired models (119) will include new 'Endural' silicone-aluminum treated heat exchangers.

The 119/219 units are shipped with the heat exchanger compartment assembled and the fan compartment disassembled. This permits easy handling to the furnace location—even through narrow doorways and stairwells.

Four gas and four oil-fired models are available with inputs ranging from 110,000 to 175,000 Btuh. All oil-fired models are easily convertible to gas. Deluxe options include:

FILTERS—Standard replaceable chemically treated filter. Options include an activated charcoal filter for odor removal. An electronic air cleaner is designed to fit in the blower compartment. A Filter Flag is included as part of the electronic air cleaner package.

GAS VALVE—A new electronically modulated gas valve, "Levelizer III," permits the gas-flame to be varied from full to ⅓ of input.

COOLING—All 119/219 are built for the addition of summer air conditioning with high capacity air flow.

Now available

ANACONDA® ACR

Copper Tube (Type L)

for Air Conditioning

and Refrigeration

Cleaned,
Dried,
Capped,
Color-Coded,
Marked ACR.

This new Anaconda product is available in 20-foot straight lengths, hard temper, in standard nominal sizes from ¼" through 6". The color of stripes and lettering is blue, consistent with the color code for Type L. The caps are yellow for quick identification.

Anaconda also now offers a broader range of sizes of Copper Refrigeration Tube in coils—dehydrated, ends sealed, and uniformly soft temper. Anaconda Refrigeration Tube is available now in sizes from ⅛" O.D. through 1⅜" O.D.

When you order copper tube from your wholesaler be sure to specify Anaconda ACR Tube, Anaconda Refrigeration Tube and Anaconda Fittings, products of Anaconda American Brass Co., Waterbury 20, Conn. 6629 L

ANACONDA®

COPPER TUBE AND FITTINGS

Anaconda American Brass Company

THE DIFFERENCE IN THE AIR IS GENERAL ELECTRIC

CENTRAL AIR-CONDITIONING

GENERAL ELECTRIC

Air Conditioning Department, Tyler, Texas

Heating & Air Conditioning Show--

(Continued from Page 1, Col. 4)

talking recession have we had reports of hold-ups on orders which seemed about ready for delivery."

A manufacturer of components used in virtually every air conditioning system of any size reported that orders received in January were the second highest for any month in the long history of the company, and that business had been so good since the first of the year, that it was almost beyond comprehension.

"Air conditioning is bound to be a growth industry, regardless of what happens to the economy," declared Frank J. Nunlist, executive vice president of Worthington Corp. "Whether home building is up or down, there will be a higher percentage of new air conditioned homes. We can assume a 15 to 20% annual rate of growth in central residential air conditioners and package systems."

Nunlist returned recently from a swing around the country visiting all of Worthington's district sales offices, and he reported that with one exception all expressed optimism on the basis of orders being placed and of business in sight.

D. C. Minard, president of the Trane Co., said his company will show a substantial increase in the first quarter this year over the first quarter of 1960, which was comparatively light although 1960 as a whole was the firm's most profitable year with sales exceeding $100 million for the first time.

There is a good chance for 1961 to show marked improvement over 1960, declared Cecil Boling, president of Dunham-Bush, Inc., manufacturer of a wide range of air conditioning, heating, and refrigeration products. While the year may have started out more slowly than '60, the pickup that comes usually around May could be much better, and the rate of sales throughout the year should be generally better, Boling indicated.

With respect to product trends based on the displays at the show (many of the new products are pictured in the NEWS picture coverage of the show) the principal ones seemed to be these:

More Packaging of Products and More True "Packaging." The packaged cooling products in particular are getting larger in capacity, yet with a relative reduction in size. As the designers squeeze more capacity out of drives, design, and metals, it permits them to produce the complete package in larger capacities, ready for shipment to the job site. And even though controls are becoming more complicated, the tendency is for a pre-wired factory control package which will require a minimum of handling at the job site.

The trend in packaging in heating systems is most notable in the hydronics field, which for many years was marked by a clutter of components brought together at the job site. Trend now is to package either at the factory, or at the contractor's shop. For example, one residential system has completely automated hot water heating system zones separately piped from the boiler out with motorized zone valves mounted on the returns at the boiler. This permits the entire system, except for piping and thermostats, to be shipped in one package.

In the field of smaller packaged air conditioning, the rooftop unit with its simple mounting and installation features is finding a place in the lines of more and more manufacturers.

Electric Heat: Increased scope is the note here, with more complete electric furnaces introduced, and resistance heating elements offered in larger capacities. New in electric panel heating were panels consisting of a maze of printed circuitry bonded into a ultra-thin plastic sandwich and mounted on an aluminum sheet.

Heat Pumps: More models, increased capacities in many lines, automatic controls (with changeover) in more and larger systems.

Condensers for Refrigerating Systems: Although the air-cooled condenser continues to take an increasing share of the market generally, and is continually expanding its range, improvements are being made in both cooling towers and evaporative condensers which have made them more competitive.

Air Cleaners and Purifiers: An area in which there were great contrasts. There seems to to be a directed effort to make the basic type of dirt-collecting filter as simple as possible, to cut installation and replacement effort. At the other end of the line, the more complex air cleaners and purifiers are becoming elaborate and more specialized, requiring the acquisition of more knowledge of the requirements and the equipment available to meet such requirements. One trend seems to be the combining of conventional particulate filters with electrostatic air cleaners and odor control elements.

Thermoelectric Devices: Making their first appearance in an industry show on any scale, these devices that heat, cool, or generate electrical power may be a portent of what may happen in the future. With practical uses just making their debut (C. A. Olsen Mfg. Co. has a thermoelectric generator that picks up heat from a gas-fired furnace, converting it to electrical energy to drive the blower motor) these devices got a lot of attention from show visitors.

Controls: In the field of controls, there are so many innovations, so many refinements, that it would be difficult and unfair to single out any for singular mention. However, a newly-developed register control, which opens and closes a supply shutter, and permits temperatures to be regulated by manually set dials on the registers, appeared to be an innovation. There were a number of new electrified zone valves offered, most of them for hot water, but at least one designed to handle warm air dampers.

High Velocity Systems: Changes in the design and construction of various system elements are aimed at improving efficiencies and reducing complaints on noise. Something of an innovation was an extreme high pressure system, adapted from ship applications, consisting of a hot and cold deck unit forcing air through 2½-in. steel tubing at velocities up to 6,000 fpm.

The 16th International Heating & Air Conditioning Exposition will be held Feb. 11-14, 1963, in New York City.

TOP VARIETY

IN THE ICE MAKER BUSINESS!

YORK ICE CUBERS AND FLAKERS

...A STAR PERFORMER FOR EVERY PROSPECT IN YOUR MARKET AREA!

You name it, York has it—all the latest ice maker models, in *all* the right capacities, with *all* the features you need to meet *all* the special demands of the big, booming commercial market and bring you the Top Bonanza in sales for '61!

YORK CUBER, WATER COOLED. Up to 400 lbs. per day capacity.

YORK CUBER, WATER COOLED. Up to 225 lbs. per day capacity.

YORK FLAKER, AIR COOLED. Delivers up to 1,000 lbs. of ice per day.

YORK CUBER, AIR COOLED. Makes up to 200 lbs. of ice per day.

YORK FLAKER, WATER COOLED. Up to 1,000 lbs. capacity per day.

FLAKER—REMOTE, WATER COOLED. Up to 8,000 lbs. capacity per day.

FLAKER—WATER COOLED. Up to 2,400 lbs. capacity per day.

YORK FLAKER, AIR COOLED. Up to 300 lbs. per day.

3 EASY PAYMENT PLANS!

BALANCED REFRIGERATION!

Sign up with York now for the

TOP BONANZA IN '61!

Top Performance Bonanza! Rigid quality control, *guaranteed* capacities!

Top Variety Bonanza! A model for every purpose!

Top Advertising Bonanza! Nationally advertised, nationally accepted!

Top Profit Bonanza! You sell at a competitive price with higher mark-ups!

76th YEAR in air conditioning and refrigeration —the longest run of them all!

YORK BW

YORK

THE QUALITY NAME IN AIR CONDITIONING AND REFRIGERATION

YORK CORP., SUBSIDIARY OF BORG-WARNER CORP. WEST GRANTLEY ROAD, YORK, PA.

Exhibited In Chicago

TELEVANCE CORP's electronic sentry designed to prevent maintenance problems by forwarning of refrigerant troubles absorbs the attention of E. O. Ponder (l.) of U. S. Gauge Co. while Larry Russum, Televance vice president, gives him the pitch.

SECTION OF 3-STAGE FILTER shown by Mamco Corp. is this electrostatic filter element being described by Fred Schumacher of Mamco to Albert G. Weil, AMC, Inc., Chicago. The three-stage air cleaning unit consists of mechanical filter for large particles, electrostatic unit for fine particles, and charcoal filter for odors, gases, and smoke.

FIRST 50-TON factory assembled heat pump to be shown at a trade exposition bulked large in the York Corp. booth. Bill Divine (l.), assistant general sales manager, and Al Johnson, product manager, of York's Engineered Machinery Div., check it over.

UNUSUAL ENTRY was Big Smith, a "horse" made of life-size replicas of many of the fractional and integral horsepower motors manufactured by A. O. Smith's Electric Motor Div. Shown listening to the critter's new electronic "voice" are F. J. Gleason, Jr., treasurer of the Copeland Refrigeration Corp.; G. P. Hough, North Central commercial vice president for A. O. Smith; B. W. Moreland, Copeland vice president; and C. M. Poston, Electric Motor Div. sales manager.

LOW, NARROW silhouette is feature of remote air-cooled condenser measuring only 18 in. wide introduced by Western Supply Co. J. C. Owens (l.), sales manager, checks the unit with Max Solomon, Western Supply Engineer.

LATEST product development displayed by Refrigeration Research was its receiver designed especially for automotive air conditioning systems. Here it's examined by E. W. Bottum, president; A. C. Huber of Crown Refrigeration Supply, Baltimore; and C. R. Logan, manufacturer's representative.

QUESTIONING THERMAL Engineering Corp. representatives about the company's high pressure double duct air conditioners are Bob Dannenburg and Arthur R. Wallace (backs to camera), Chicago consulting engineers. Facing camera are Gerald O'Dwyer (l.) and Perry Ground of Thermal Engineering.

CIRCULAR AIR-COOLED condenser featuring straight through flow with little pressure drop and vertical air discharge which was displayed by the Yuba Aimco Div. is explained to Garland Alexander (l.) of Air Conditioning Suppliers, Richmond, Va., by Jim D. Swank, sales engineer for Yuba Aimco.

WHY TRAP-DRI®?

BECAUSE

costly Egyptian cotton plus deep filtration tunnels give 5 to 9 times* the filtering area of conventional filters

*For particles down to 5 microns in size.

The diamond pattern on the filter element is no mere decoration. It's a pattern behind which you'll find a honeycomb of diamond-shaped tunnels for full-depth filtration. This filter design can only be achieved through use of expensive, long-fibre Egyptian cotton. Just one of the investments we make to give you refrigeration's finest drier-filter-strainer . . . perfect protection against corrosive acids, moisture, dirt.

Other TRAP-DRI features include *a balanced blend* of PA 400 silica gel and molecular sieve that completely adsorb acid and acid-forming moisture.

Write today for facts about TRAP-DRI and other products of the Heating and Air Conditioning Division, Controls Company of America . . . creators of new ideas for control of time, temperature, flow and motion.

Surface-type filter (left) — Dirt collects on outside only, gradually closing filter.

410 filter (right) — Dirt is collected in deep, large-capacity tunnels without clogging filter.

Creative Controls for industry

CONTROLS COMPANY OF AMERICA

HEATING AND AIR CONDITIONING DIVISION

2460 N. 32nd Street, Milwaukee 10, Wisconsin • COOKSVILLE, Ontario • ZUG, Switzerland

It's a Natural

FEDDERS BIG FEATURE for 1961, a built-in clock that acts as a timer, proves to be a natural for the roof spectacular located at the entrance to the Queens Midtown Tunnel leading into Manhattan. The clock is an actual working unit that was built right into the sign. Fedders New York distributor, The L&P Electric Co., Inc., is the advertiser. Fried Advertising, L&P's agency designed the sign.

Michigan RSES To Meet March 18

FLINT, Mich.—The 12th annual convention of the Michigan Association of Refrigeration Service Engineers Society will be held Saturday, March 18, at Lifsey Distributing Co., 1409 N. Saginaw here, refrigeration wholesaler.

The Motor City Chapter of Flint will conduct the meeting. Frank Danek of Danek Refrigeration, Owosso, is convention chairman.

Present plans call for three speakers at the morning session and two for the afternoon session, with a membership meeting and election of officers late in the afternoon. A cocktail hour will be held from 5 to 6 p.m., followed by the annual banquet, installation of new officers, and entertainment.

Areas Report Sales

Room Air Conditioner Sales Estimated At 1,521,300 Units During 1960

DETROIT — Estimated total industry sales by manufacturers of room air conditioners in 1960 amounted to 1,521,300, compared with 1,660,300 in 1959, according to the National Electrical Manufacturers Association.

The association estimated that December sales totaled 61,500 units, up from the 47,600 sold in the same month of 1959.

These figures are based upon expansion of data reported to the NEMA Statistical Dept. to cover total industry sales including exports. The 1960 figure includes a revised figure for June—228,700. June sales previously were estimated at 228,800.

Several reports on 1960 distributor and retail sales of air conditioners have been received by the NEWS.

PHILADELPHIA AREA

The Electrical Association of Philadelphia reported that distributor sales in that area totaled 54,437, compared with 68,235 in 1959. The report, which covers sales in Bucks, Chester, Delaware, Montgomery, and Philadelphia counties, included this month-by-month breakdown:

Month	1960	1959
January	4,709	4,214
February	4,073	3,412
March	7,514	5,404
April	10,422	5,408
May	9,511	8,301
June	8,338	12,337
July	1,421	8,015
August	251	2,173
September	429	2,026
October	739	2,876
November	3,231	7,320
December	4,301	6,749
Total	54,437	68,235

MIAMI AREA

In the territory served by Florida Power & Light Co., Miami, air conditioner sales declined to 47,045 from 51,739 in 1959. December sales totaled 4,636, against 5,420 in 1959.

The FP&L figures show unit sales to retail dealers as reported by state wholesalers. Also included are sales by department and chain stores and some retailers who purchase their merchandise from sources other than state wholesalers.

ST. LOUIS AREA

Union Electric Co., St. Louis, reported that air conditioner shipments by 10 distributors to their dealers in its territory amounted to 15,437, off 31% from the 1959 figure of 22,383. December shipments dropped to 602 from 2,541 in 1959.

WICHITA AREA

A report issued by Kansas Gas & Electric Co., Wichita, shows that retail sales of room units in its territory in 1960 totaled 4,764, down 21.4% from the 6,061 sold in the previous year. Sales of central air conditioning systems were reported off 15.7%, totaling 595 in 1960 and 706 in 1959.

CLEVELAND AREA

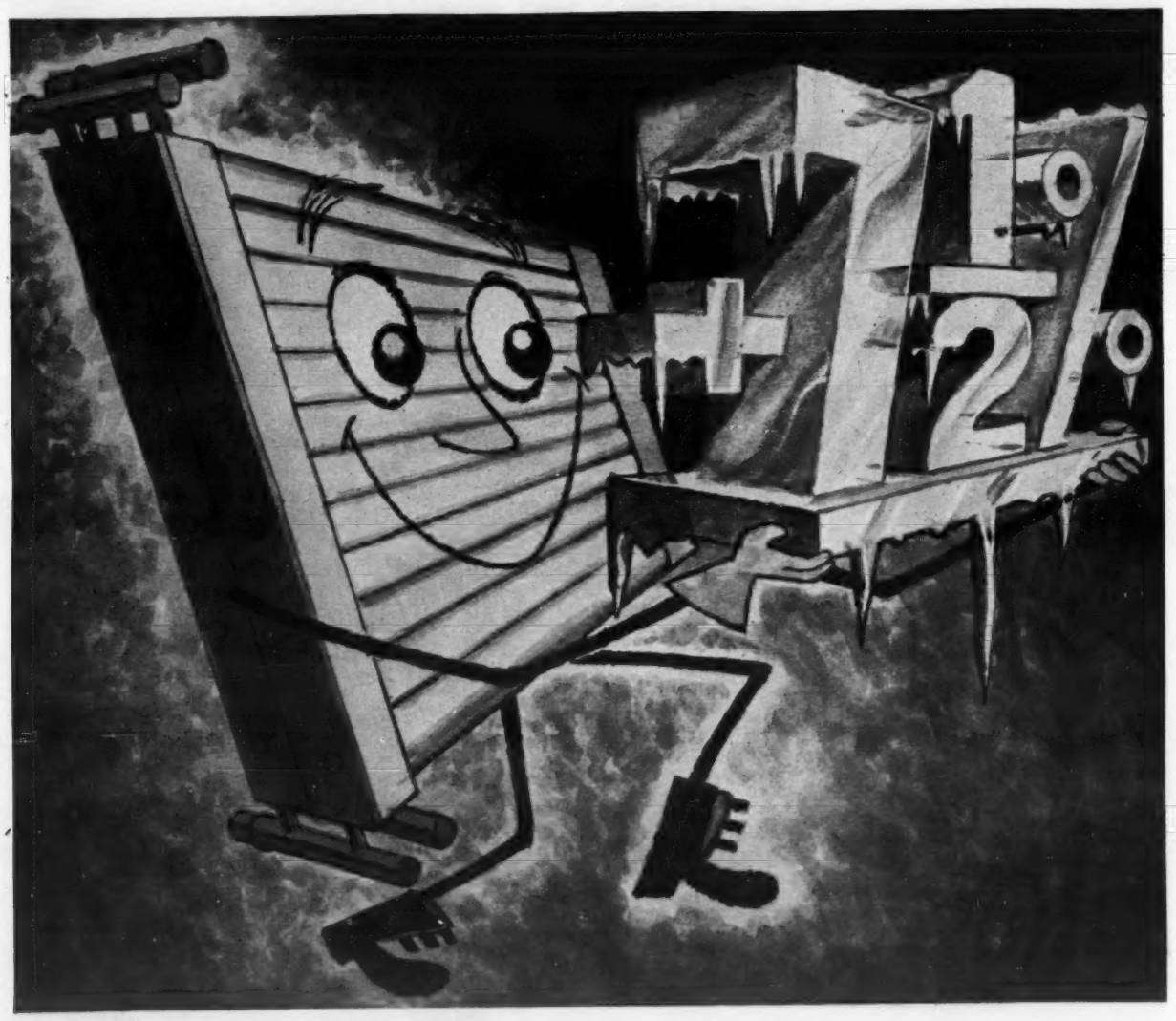
The Electrical League of Cleveland indicated that shipments of central residential systems in Cuyahoga County reported by league member distributors held exactly even with last year at 531. December shipments declined to 12 from 27 in the previous December.

Shipments of room air conditioners by the distributors declined to 7,166 from 10,716 in 1959, a drop of 33%. In December, shipments skidded to 158 from 1,021 in the like 1959 month.

WEST PENN AREA

In the southwestern area of Pennsylvania served by West Penn Power Co., dealers sold 2,222 room coolers compared with 3,183 in the previous year.

The Washington Water Power Co., Spokane, issued a report which showed sales in its territory of 229 central air conditioning units and 990 room units in 1960.



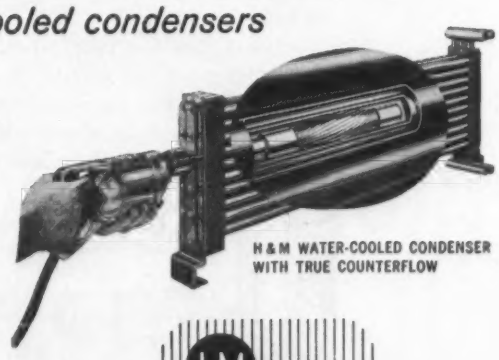
Want a 7½% increase in refrigeration capacity for the same horsepower?

Use Halstead & Mitchell cleanable water-cooled condensers

Test results indicate an average of 15 degrees of subcooling in H&M condensers because of true counterflow of refrigerant and water. Since liquid refrigerant leaves the condenser at a lower temperature, system capacity is increased about ½% for each degree of subcooling—without additional power input.

But that's not all: Halstead & Mitchell Water-Cooled Condensers have easily removable end plates for quick, safe, *mechanical* cleaning of the water passages. Scale and sludge are quickly removed so that condenser efficiency stays high; operating costs, low.

Featuring double-tube design, seamless copper tubing and brass headers, H&M condensers are available in ⅓ to 25-ton capacities. All are U/L approved, and can be used singly or in multiples on racks. Ask your H&M refrigeration wholesaler for complete information, or write Halstead & Mitchell Co., Bessemer Building, Pittsburgh 22, Pa.



H&M WATER-COOLED CONDENSER WITH TRUE COUNTERFLOW

HM Halstead & Mitchell

Air Handlers • Finned Coils • Air-Cooled Condensers • Cooling Towers • Water-Cooled Condensers

Delco Builds New Lab To Develop, Test Its Home Conditioning Equipment

ROCHESTER, N. Y.—A specially designed and constructed laboratory for the development and testing of its new "GM Delco 365 Home Conditioning" equipment was placed in operation recently according to Vaughn H. Hardy, chief engineer of the Delco Appliance Div., General Motors Corp.

This facility is located in the main plant of the division here. It supplements the fully-equipped Heat and Combustion Test and Research Laboratories long in operation for development and test of Delco Heating Equipment to American Gas Association (AGA) and Underwriters Laboratories requirements.

The new testing facility occupies approximately 4,000 sq ft of floor area and is designed for future expansion. It consists primarily of two adjacent test rooms each approximately 30 by 20 ft with one 30-ft side common to each. Both rooms have cork insulation for walls, ceilings, and floors. In addition, the rooms are moisture-proof. Outside walls are of concrete block and the inside cork is surfaced with "Transite."

"Temperatures in the rooms can be held to an accuracy of three-tenths of 1%," the division reported.

"Temperatures available range from -20°F to 140° with relative humidity controllable from 20 to 95%.

"The second room in the new facility is called the 'inside room' and is temperature conditioned to simulate conditions in the average home or building. Temperatures can be controlled from 70° to 104° and with relative humidity ranging from 20 to 95%.

"A central control panel calibrated for specific test conditions and manually adjustable for other conditions is available to the Delco Appliance engineers when working with the new facility.

"All wet and dry-bulb temperature measurements are made with mercury thermometers in moving air. Thermometers are selected and matched for one-tenth accuracy. Other temperatures such as evaporators, condenser coils, motor windings, etc., are recorded on a 24-point strip chart recorder.

"Air flow measurement is accomplished with calibrated orifices in air flow boxes. Two boxes are available, one for volumes up to 5,000 cfm and the other up to 10,000 cfm.

"Instrumentation is provided for the measurement of voltage, current, and power at the test unit. Meters are arranged in a portable test panel with switching arranged so that the total power or the power to each section of the unit may be measured, such as the compressor motor, one or two condenser fan motors or the evaporator motor. Regulated voltage is available at 115 and 230 single phase and 208, 230, and 440 volts three phase, all adjustable ± 10%.

"In order to develop the test conditions in the rooms, each room is equipped with an air conditioner capable of circulating 10,000 cfm of conditioned air, which enters through a perforated false ceiling and evenly distributed throughout the room. Approximately 300,000 Btu of cooling and 300,000 Btu of heating are available and may be divided between the two rooms, proportioned as needed, or as the controls demand.

"Preliminary tests have indicated that cooling units and heat pumps up to 10-ton capacity (120,000 Btu approx.) can be tested under all test requirements.

"The 'outside' room has been designed with large refrigerator type doors and may be used as a cold room. Ramps have been provided so that an auto may be driven in for cold tests on accessory equipment. No provisions are made for operating the engine in the room.

"In addition to the two test rooms, the floor area provides space for experimental testing and development where environmental conditions are not important.

"The laboratory is fully equipped for gas leak detection, vacuum purging, and pressure and temperature measurement, with the instrumentation and facilities of the Heat and Electrical Laboratories also available for special tests, such as noise and vibration measurements and analysis."

York Appoints 3 Branch Managers

YORK, Pa.—The appointment of three new branch managers has been announced by E. R. Pierce, general manager, packaged product branches, for the York Div., Borg-Warner Corp.

Roger L. Rae has been appointed manager of York-Detroit Wholesalers. He was formerly Minneapolis district manager for York.

Ralph W. Phillips, formerly district sales manager for York, with headquarters in Memphis, has been named to manage the St. Louis packaged products wholesale branch.

Warren D. McKelvey is the new manager of York Contractors Branch in Long Island City, N. Y. For five years prior to joining York last fall, he served as manager of the St. Louis office of Weil & Moses.

3 Cities Join In Training Session

CLEVELAND—A joint sales training session was staged recently by members of three Silver Shield Indoor Comfort Bureaus in Michigan—Lansing, Kalamazoo, and Pontiac, a report from the National Warm Air Heating & Air Conditioning Association here revealed.

"The sales training session is another facet of the many-pronged program of NWAH-ACA designed to help the dealer-contractors of the industry improve their position in their communities through a campaign of self-improvement," it was pointed out.

Other cities slated for the sales program: Lima, Ohio; Cedar Rapids, Iowa; Memphis; and Buffalo.

H & H has
The "eye" you see here is a Magnaflux unit that watches for tubing imperfections the *ordinary* eye cannot see. The inclusions, laminations, laps, slivers, wavy conditions inside and outside of the tubing are all discovered *before* delivery is made to the customer. Add a bright, clean, uniform color, burr-free ends and a grain size that meets your specifications exactly, and you have tubing of a quality that is hard to match.
Better Brass and Copper Products Since 1930
H & H TUBE AND MANUFACTURING CO.
271 North Forman Avenue, Detroit 17, Michigan • Offices from Coast to Coast
SEAMLESS
LOCKSEAM
COIL STRIP
STRAIGHT AND COILED TUBE
TUBULAR PARTS
an Eye for Quality
PLANNED FOR PRECISION

Inside Dope

By GEORGE F. TAUBENECK

(Continued from Page 1)

was a proliferation of exhibits devoted to *pure* air.

One manufacturer described a new concept of ionizer for cleaning air:

"Our ionizer design secures a maximum area of electron discharge in a high capacity electronic air cleaning unit by providing the negative electrodes with a curved face. This innovation, plus a reduction in spacing between the plates, is believed to have achieved the ultimate balance between spacing and voltage."

Atom smashers have nothing on dust shatterers shown at the show.

One such device combines an electronic generator and a series of statically charged screens to produce a heavy bombardment of electronic particles which smash dust and prevent it from settling.

And then there was the exhibit of deodorant paint—which, when sprayed on air filters, adds a pleasing aroma to inside air.

Our sister publication, AIR ENGINEERING, was well pleased by these developments.

The Real Jack Paar Story

Here is the censored story which threw Jack Paar off TV for a few weeks:

A newly married couple sought a house in the country. After finding one they thought would be suitable, they wended their way back to the city.

Later that night the wife happened to think that they had not inspected the toilet, and she decided to write the owner for further information about it.

She was a modest young lady, so she hesitated to spell out "Water Closet" (as it is known in England). In her letter she referred to it as the "W. C."

Owner of that house in the country did not understand that W.C. equated with "water closet." After pondering for a while, he finally decided that she meant the neighboring Westmont Church, and answered her as follows:

"My Dear Madam:

"I regret very much the delay in answering your letter, and now take pleasure in informing you that the W. C. is located nine miles east of the house, and is capable of seating 2,150 people.

"This is unfortunate indeed, if you are in the habit of going regularly, but no doubt you will be interested in knowing that a great number of people take lunch along and make a day of it.

"Others go in automobiles, arriving just in time, but are generally in too big a hurry to wait if the place is crowded. The last time my wife and I went was six months ago and we had to stand up all the time.

"It may interest you to know that plans are under way to have a bazaar to raise funds for plush seating in the W.C., as this is a long felt need. I may mention, too, that it pains me very much not being able to go more frequently.

"It is surely through no lack of desire on my part, but as we grow older it seems to be more of an effort, particularly in cold weather.

"Hoping to see you next time I go, I remain."

Last Laughs

An insurance salesman, who'd found this couple to be especially good patsies for his business, visited their home on a dull evening.

Husband wasn't there, and wifie was in no mood to talk insurance. Somewhat to his surprise, he and she became, er, involved.

Telephone rang. It was her husband. The salesman was scared green. He started to dash away. She recalled him.

"Don't be in such a rush," she trilled. "Hubby just phoned that *you* are entertaining *him* downtown."

The Chagrin Falls (Ohio) Amateur Theatre advertised:

"The Respectful Prostitute, with an all-professional cast."

(We are indebted to the Home Appliance Parts and Service Co. of Cleveland for the above juicy item.)

Add Definitions

Small town: Where you talk for half an hour when they give you a wrong number.

Remedy for water on the knee: give the baby back to its mother.

Add Newspaper Groaners

Staid misses have often stayed misses.—*Detroit Free Press.*

Wednesday morning he was arraigned in county court, when he called for a trial by jury, consisting of five men and a physician.—*Marshall* (Ill.) *Herald.*

Lagniappe

Overheard at a neighborhood wedlock ceremony:

"He's taking her for better or worse. But she's worse than he figured."

Applying for fire insurance on his modest home, functional outhouse, and lavish barn, farmer John Davison filled out a small questionnaire.

Q: "Do you have home facilities for putting out fires?"

A: "It rains occasionally."

Bundy can mass-fabricate practically anything

Battle of the Fuels

'Seattle Times' Reports Fight Among Gas, Oil, Electric Firms

SEATTLE — In what was called a "new move in the battle for the multimillion-dollar home-heating business of the Puget Sound area," Washington Natural Gas Co. offered a plan under which burners using gas will be substituted for oil burners on a monthly rental basis.

Heating-oil dealers have been offering a monthly service-charge plan for keeping oil furnaces in repair.

Reporting on the competitive battle, *The Seattle Times* said competition between gas and oil has been sharp ever since natural gas reached this area in 1956.

NEWSPAPER SURVEY

The newspaper said its Consumer Analysis Survey last year showed that the use of gas in home heating in this area had increased from 4.1% in 1956 to 9.7% in 1960. Heating oil, however, continued to hold a big lead, it was pointed out.

The survey indicated that 220,167 homes in Seattle and its suburbs were using oil heat; 26,562, gas; 19,169 electric heat; and 9,311 wood or coal.

The gas company reported more than 42,000 home-heating customers in its entire service area, which extends from Chehalis to Marysville. The company claims it is getting more than 90% of the new tract-development business in areas served by gas and about half of the replacement business.

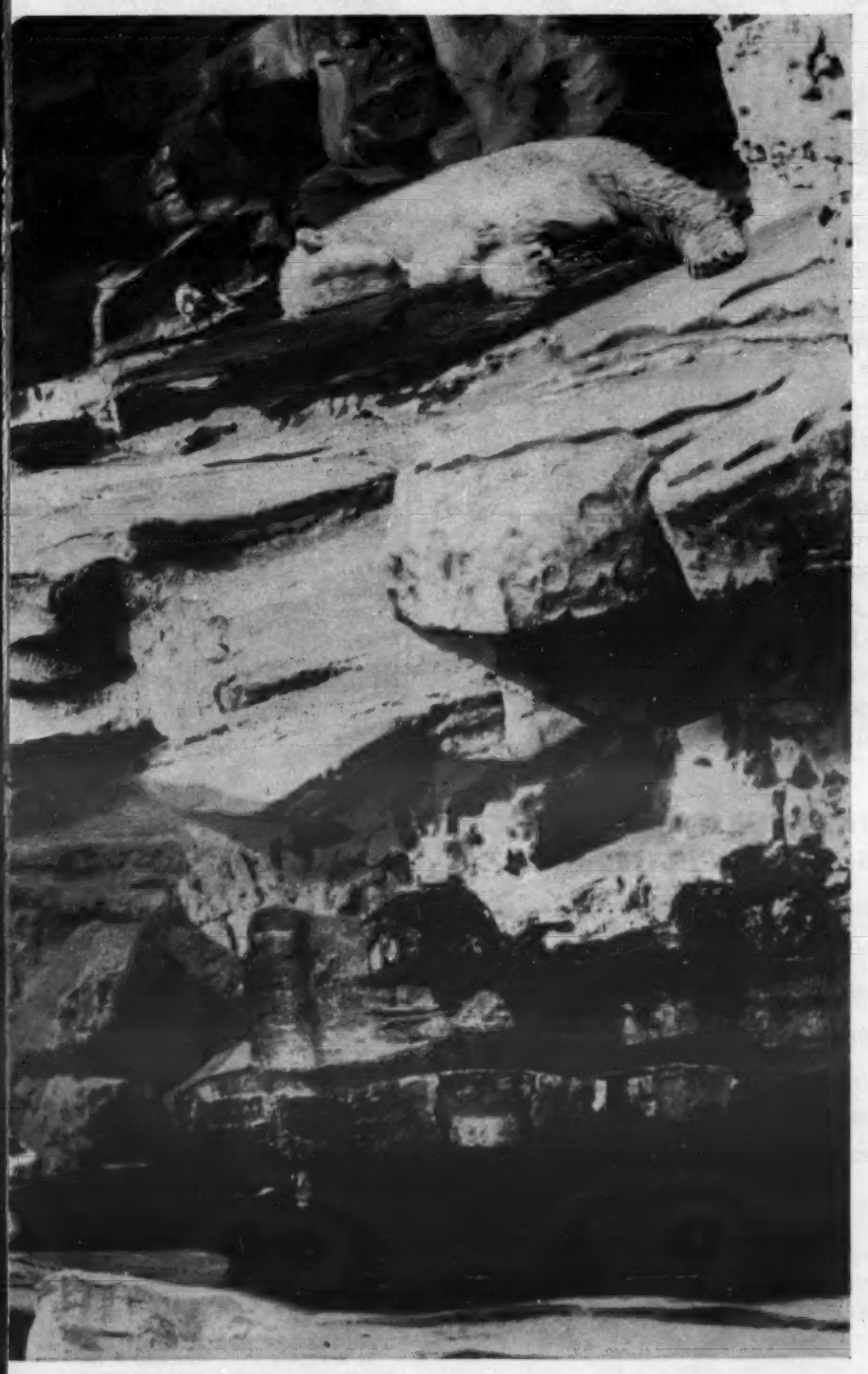
According to the *Times*, electric heat also has been making substantial headway in this area in recent years. The paper's survey shows an increase from 2.3% to 7% between 1956 and 1960 in the number of area homes using electricity for heat.

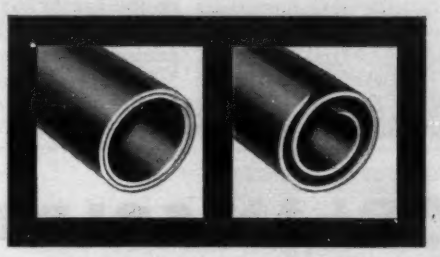
"The greatest increase in these installations, however, was in 1959 when balcony-type Seattle apartments were constructed in large numbers to beat new zoning requirements," it was pointed out. "Most of these apartments installed electric heat."

Complex or simple—regardless of the shape—your tubing components need precision bending to fit fast and fit right on your production line. ¶ Bundy turns out parts like these by the thousands or millions . . . at a remarkable low unit cost. These tubing components are made from Bundyweld®, the only tubing of its kind that's backed by years of manufacturing experience and accepted as the safety standard of the refrigeration industry. Bundyweld steel tubing is covered by ASTM 254 and Government Specification MIL-T-3520, Type III. ¶ Next time you need tubing, phone, write, or wire: Bundy Tubing Company, Detroit 14, Michigan.

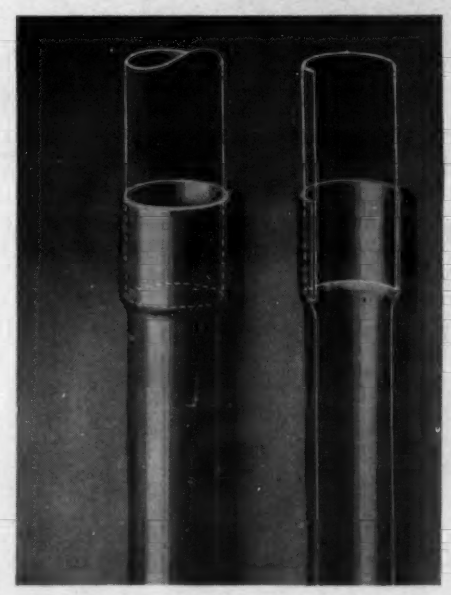
BUNDY TUBING COMPANY • DETROIT 14, MICH. • WINCHESTER, KY. • HOMETOWN, PA.

World's largest producer of refrigeration tubing. Affiliated plants in Australia, Brazil, England, France, Germany, Italy, Japan.





Bundyweld, double-walled from a single copper-plated steel strip, is metallurgically bonded through 360° of wall contact. It is lightweight and easily fabricated . . . has remarkably high bursting and fatigue strengths. Sizes available up to ⅝" O.D.



The Bundyweld expanded connection makes tight joints possible with only one on-the-job operation. Note that the mating tube needs no reducing or sizing and that the flow through the finished joint will remain completely unrestricted.

BUNDYWELD® TUBING

Environmental Meeting Set for April 5-7

WASHINGTON, D. C. — A technical program featuring 70 presentations in the many orientations of the field of environmental testing has been announced for the annual meeting of the Institute of Environmental Sciences.

Three parallel morning and afternoon sessions are scheduled at the Sheraton Park hotel here on April 5, 6, and 7, 1961.

Over 1,000 scientists and engineers are expected to register for the sessions to exchange information on the latest advances in simulating environmental conditions encountered by satellites, missiles, rockets, and all their components of ground support, control, and tracking equipment.

All major weapons system contractors, research institutes, and government test agencies will be represented in the technical program, it was stated.

In addition, a large exhibit floor will be devoted to the latest product developments by the environmental equipment and instrumentation manufacturers. This exhibit will be open free to the public.

NLRB Rules Against Picketing Plant Already Represented

WASHINGTON, D. C. — The National Labor Relations Board recently ruled that a Teamsters local had unlawfully picketed Sitrue, Inc., a Utica, N. Y., paper manufacturer, for recognition while the employes were being represented for collective bargaining by another union, the United Papermakers & Paperworkers, AFL-CIO.

The unanimous decision, signed by the five members, was the board's first ruling in a case brought to it under Section 8 (b) (7) (A), one provision of the 1959 Landrum-Griffin amendments to the Labor Management Relations (Taft-Hartley) Act.

Section 8 (b) (7) (A) of the amended act forbids recognition or organizational picketing of an employer where he "has lawfully recognized in accordance with this Act any other labor organization and a question concerning representation may not appropriately be raised under Section 9 (c) of this Act."

Building Features Electric Heating Cooling, Filtering

MINNEAPOLIS — Electric heat, air conditioning, humidity control, and air purification will be among features of a $7 million, five-story building here which is to house Northern States Power Co.'s general office, Minneapolis division headquarters, and load dispatchers' headquarters.

Allen S. King, Northern States president, said the building is expected to attract attention of architects and builders because of its use of electricity for all utilities.

TECH CENTER

by
FRANK J. VERSAGI

Three Compressors Compared

I have before me the power consumption records of three compressors, one open-type and two semi-hermetics, each a different brand.

All three compressors have been simultaneously doing almost identical work. Each is connected to 24 ft of McCray frozen food cases in a supermarket whose records show that the load on the refrigeration units is practically equal.

The records show that #1 compressor, the open-type, uses 14% more power than does #2. The third compressor, a semi-hermetic like #2, uses 22% more power to do the same job.

"As far as we're concerned," says the engineer who conducted the study, "#2 compressor is the best built. Although we haven't measured them, the tolerances are probably closer, the valve plate is probably better than those on #3."

One result of this study is that the chain's next new store was equipped entirely with #2 compressors.

Another result, a bit more disturbing, is that the engineer claims that his study of these and other compressors has convinced him that published ratings "are obviously calculated with a slipstick, rather than by calorimeter."

Larger Compressor Of Same Brand Failed

He finds, too, that he cannot extrapolate results from one size compressor to another. "The #2 brand, for example, which shows up best in these tests of 3-hp units, falls flat on its face in the 5-ton unit.

"We tried such a 5-ton compressor on a low temperature job where we had to reach about 14 in. of vacuum. It would get down to about 9 in. then hold.

POWER CONSUMPTION OF 3 COMPRESSORS
3-hp. water-cooled units on frozen food fixtures

	Elapsed Time (Days)	KWH Consumption 1	2	3
April	10	302	283	317
April	13	497	433	502
July	64	2,446	2,151	2,765
September	80	3,182	2,800	3,317
Totals	**167**	**6,427**	**5,667**	**6,901**
Average kwh/day		38.5	33.9	41.3

The manufacturer changed valve plates, tried a couple other things, then finally admitted it wouldn't do the job and took it back."

In this case, a comparable compressor of another brand took on the job and performed well.

To return to the test of the three 3-hp compressors; here's the story.

The chain was becoming disturbed that some of its applications of equipment were not performing as well as they should, or at least as well as it was claimed they should. Of special interest were the 3-hp range compressors used on multiplexed low temperature fixtures.

Operating Conditions Were Kept Similar

In one store, the chain set up a test. Three 24-ft banks of McCray frozen food cases were hooked up to three brands of compressors. Care was taken to make operating conditions as nearly alike as possible. Thus, all the lines are about 75-ft long; suction lines are 1⅜ in., liquid lines are ½ in.

Pressure drop in the suction line is about ½ psi.

Each fixture is equipped with an Alco expansion valve.

The condensing units are water cooled, and measurements taken during the study showed head pressure being held at 105 psi. Aiming for a -15° air temperature, the suction pressure on all three units varied from 3 to 5 in.

Refrigerant-12 is used in the systems; the use of an efficient heat exchanger in the cases results in a 65° vapor temperature to the compressor.

Each unit was equipped with a watthour meter, and to correct for any difference in meter accuracy, the wattmeters were rotated among the three machines during the test.

Periodically, readings were taken of kilowatt hours, air discharge temperatures, suction and head pressures.

Since #2 compressor does the job with less power consumption, it obviously has the inside track on new purchases of this size compressor. The company was surprised to find that compressor #1, an open-type with less displacement capacity than either #2 or #3, came in second best in the test.

The open-type compressor consistently outperformed brand #3 as the test progressed, using 6% less power than #3, although it consumed 14% more power than the other semi-hermetic in the test.

Between the two semi-hermetics, there is a 22% difference in power consumption.

Average kilowatt hours per day:

#1 — 38.5
#2 — 33.9
#3 — 41.3

The company is just now beginning a similar study of other compressors.

BUY SPORLAN SOLENOID VALVES
for Peak Performance
on **ALL** *air conditioning and refrigeration applications!*

Buy Sporlan Products right down the line . . . from your friendly Sporlan Wholesaler.
SOLENOID VALVES
Power Packed Blue Seal Coil

• **SPORLAN Solenoid Valves** *will give you the best service on your next* refrigerant liquid, hot gas, or suction line applications. Also water, or steam installations.

• SPORLAN Solenoid Valves are tight closing. The extensive use of synthetic seating material eliminates seat leakage.

• SPORLAN Solenoid Valves with their high MOPD ratings can be used for either Refrigerant 12 or 22.

THE NEW SPORLAN 180 Solenoid Pilot Control
• *used in place of large capacity solenoid valves*
• *much more economical*
• *one size only*
• *simultaneous control of one or more thermostatic expansion valves.*

Send for Bulletin 30-10 Today!

SPORLAN VALVE COMPANY
7525 SUSSEX AVENUE ST. LOUIS 17, MISSOURI
EXPORT DEPT. 85 BROAD ST. NEW YORK 4, N. Y.

MINERALLAC
HEAVY DUTY & MEDIUM
JIFFY CLIPS

Also available without mounting hole for use with gun.

Made of heavier materials! Has exclusive inverted rib, that provides more strength at the bend of clip . . . and, of course, adds the benefits of famous "Snap On" Feature! Send for literature.

MINERALLAC ELECTRIC COMPANY
25 N. PEORIA ST. • CHICAGO 7, ILL.

What Was New

At the ASHRAE Exposition

NEW PRODUCTS GALORE were on display at the 15th International Heating & Air Conditioning Exposition in Chicago. On this and other pages throughout this issue the NEWS presents pictures of some of the new products and other displays at the show.

POSING WITH new Curtis 7½-ton roof top air conditioner are Bernhard Henn, Curtis Mfg. Co. representative in Cleveland, and Patricia Matteson of Chicago. Self-contained air conditioner is also available in 10-ton size and in combination with heating unit. Roof load is approximately 35 lbs per sq ft.

BENDIX-WESTINGHOUSE new fractional horsepower condensing units of ⅙ through ⅓ hp put the squeeze on model Pat Lee.

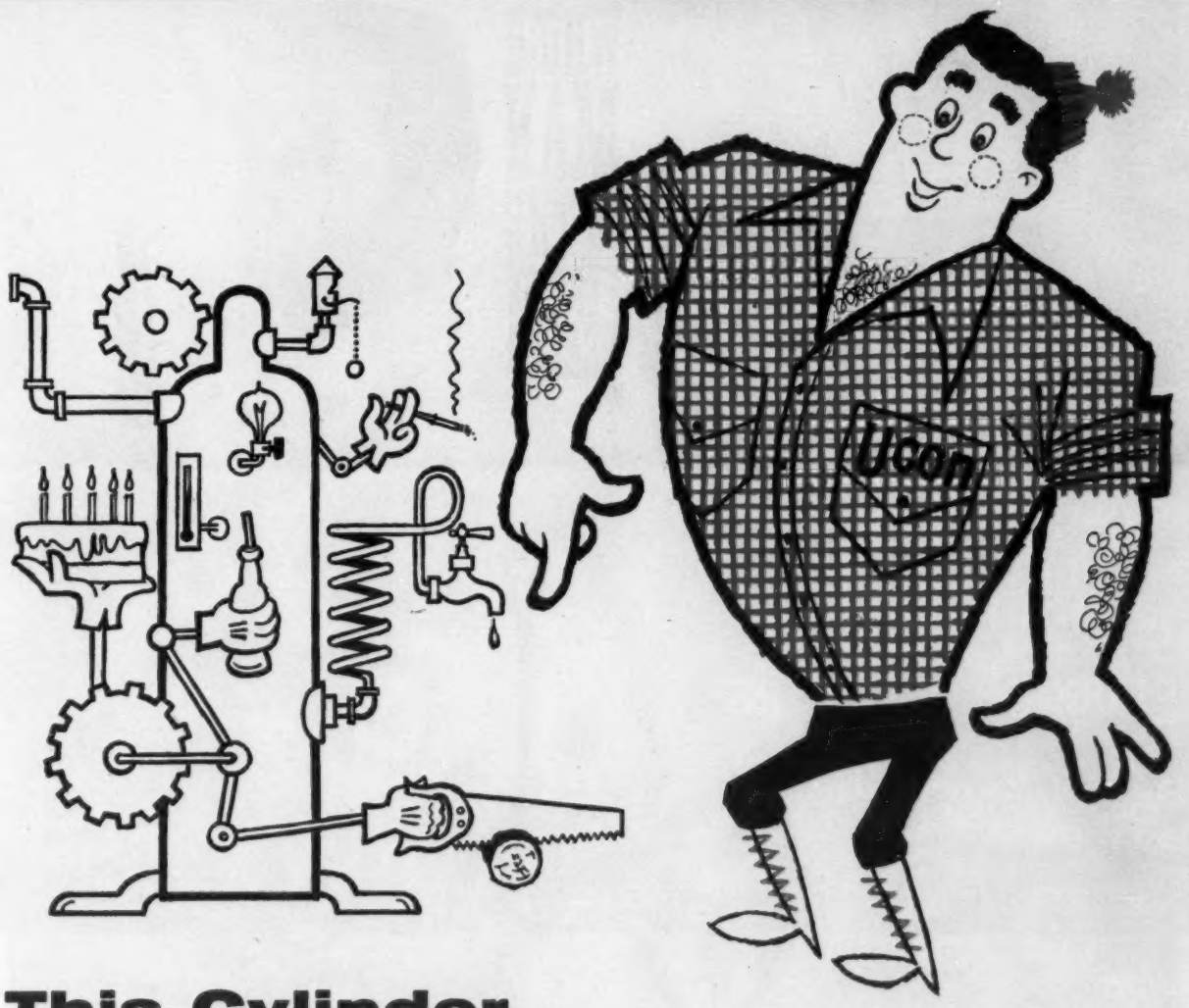
PEERLESS electric forced air furnace with cooling unit and electronic air filter finds congenial Western atmosphere at Peerless Corp. booth with Dick Whallon, assistant sales manager, and model Arlene Kieta.

HYDRONIC APPLICATION for Lennox "Comfort Curtain" air distribution system is explained by Roger Lahey (left) of the company to a show visitor. This new unit is specifically designed for use with primary-secondary pumping principle of water zone control, which is said to permit a degree of control which control valves alone do not afford.

DEMONSTRATING adjustable orifice valve for balancing steam and hot water systems introduced by Marsh Instrument Co. are William M. Ensign (l.), Marsh sales service manager, and I. Moss, Marsh New York Representative.

DIRECT-FIRED UNIT HEATER in capacities up to 400,000 Btuh, using gas or oil as fuel, was one of new products introduced by York-Shipley.

NEW General Controls four-way reversing valve in combination with low pressure or vacuum switch used to initiate defrost cycles on heat pumps gets a once-over from heat pump expert J. "Hans" White (r.) of Sealed Units, Inc., as Ray Wheeler and Jack Croushore of G-C explain details.

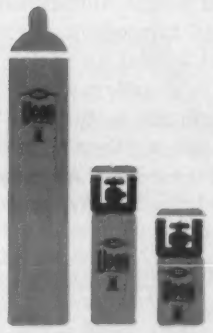


This Cylinder Does Everything...

. . . stands right side up, upside down, discharges top, bottom and middle, carries itself, heats soup, grinds nuts, and transports you to and from the customer via a detachable propulsion system. Available in 27 sizes, it's the perfect answer to your every oddball requirement.

But for every day THESE THREE WILL SUFFICE . . .

Make no mistake about it—by SUFFICE, we mean cover the ball park. In one . . . two . . . *three* UCON® Refrigerant Cylinders you'll find every important packaging convenience, every cylinder size you need, *and*—you can always be sure your wholesaler will have what you need, *when you need it.* Helpful technical assistance, too, is yours for the asking with UCON Refrigerants. Conclusion:



For the most compact and convenient line of refrigerants—
See Your UCON *Refrigerants Wholesaler*

UNION CARBIDE product — Ucon® refrigerants — exclusive sales agent ANSUL

UCON Refrigerants are manufactured by
UNION CARBIDE CHEMICALS COMPANY— Division of Union Carbide Corporation
270 Park Avenue, New York 17, N. Y.
Exclusive Sales Agent to Air Conditioning and Refrigeration Wholesalers
ANSUL CHEMICAL COMPANY, Marinette, Wisconsin

UCON and UNION CARBIDE are registered trade marks of Union Carbide Corporation

Exposition Highlights

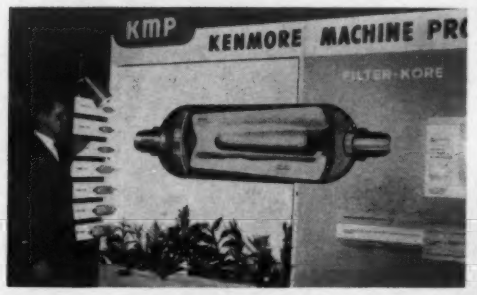
With 500 exhibits at the Exposition it was not reasonable to try to picture products featured in every one of them. Thus, picture coverage in the NEWS highlights those which seemed to hold most interest for our readers. Certain manufacturers may have been omitted because their products have been covered, or are being covered, in news stories.

However, it is more than likely that some newsworthy items were by-passed in the coverage, and the NEWS invites any exhibitor who feels that this happened to him, to submit a picture of the particular product exhibited which he believes to be most newsworthy. (More picture coverage on the Show will be published in future issues).

ACOUSTICAL TERMINAL control unit with dual duct, pneumatic constant volume control is surveyed by F. A. Freese (l.), vice president of Carnes Corp., and Phil Briggs, who heads Carnes' special products department.

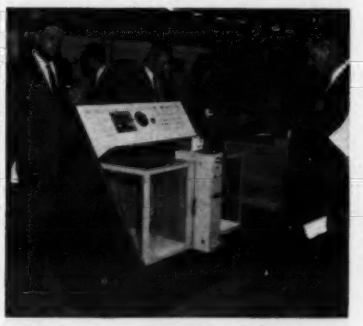
HERMETIC COMPRESSOR motor starter for handling systems up to 1,000 hp is this full-voltage type shown by Westinghouse Motor & Controls Div., and being described here by D. F. Abe to a show visitor.

ZIPPING UP AN AUTO-FLO air filter after fitting it over a metal frame, Herbert Hoover (l.), St. Louis sales representative demonstrates his skill to John T. Darrison, sales representative in Pittsburgh while Robert C. Matzen, Minneapolis manufacturer's representative, holds a display-wrapped filter.



BLOW-UP OF NEW KMP Filter-Kore is viewed by Bob Straubing, vice president of Kenmore Machine Products, Inc. Filter-Kore is said to be the only solid core carrier made of 100% molecular sieves.

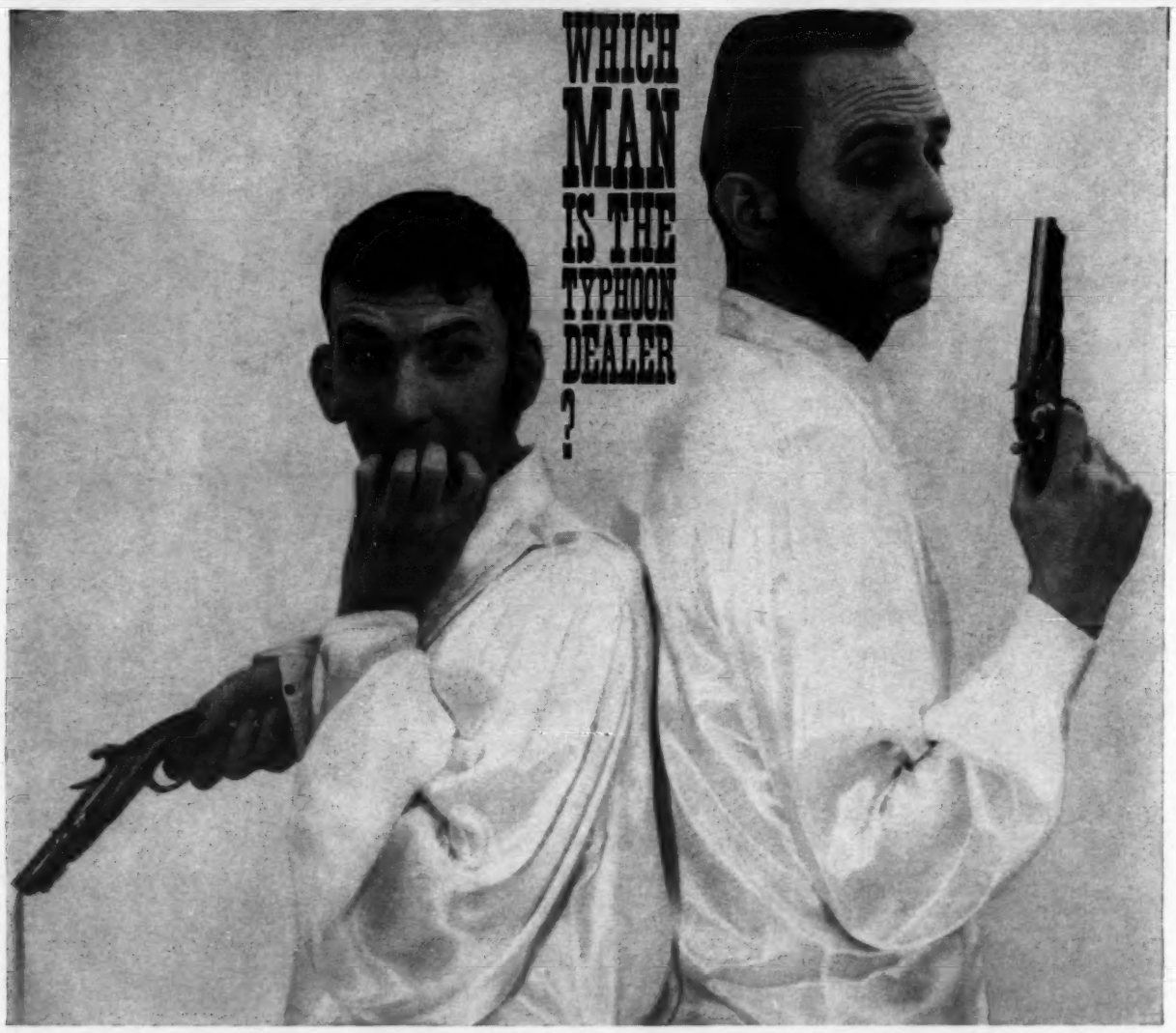
CHECKING FREEDOM FROM vibration of Goodfellow model CV 10.2-ton air-cooled condenser is Joseph H. Fogg (l.), H. L. McMurry & Co., Jacksonville, Fla. E. D. Goodfellow, president, points out that the coil is protected by a trash screen below.



NEW 1961 Honeywell electronic air cleaner gets rapt study from show visitor while G. G. Keller, Jr. (l.), Minneapolis-Honeywell sales manager at Indianapolis, awaits questions.

NEW CLD combination light troffer and air diffuser is subject of discussion between (l. to r.) C. Jacobs, Anemostat Corp. of America regional manager; W. Waeldner, Anemostat director of research, and Van Ness Harwood, Buffalo engineer.

FURNAS 3-POLE magnetic line contactor for across-the-line control of electric motors and heating or lighting loads is shown by D. H. Blake, Furnas Electric Co. regional sales manager (r.) to Earl R. Apgar, Industrial Specialties Sales, Tampa, Fla.



The smug looking fellow. He knows Typhoon for '61 is loaded for sales! He's got more ammunition than ever before—with 28 new units. Typhoon's 1961 line—the industry's biggest, broadest, most flexible line of packaged air conditioners, furnaces, heat pumps. Unmatched in versatility, too. Only Typhoon delivers customized units at little or no extra cost. Mass produced components are custom-assembled to your order. This gives you a tremendous competitive advantage, helps you sell without sacrificing profit. Typhoon for 1961 also delivers these outstanding benefits: • Financing and leasing plans to simplify payment by customers, relieve distributors of monetary strain. • Sales help on the local and national level. • "Prescription for Progress"—a new master plan and individual promotional kits to sell Commercial, Industrial and Residential Markets. • Exciting sales incentive programs offer bonus benefits for you and your family. • All the material for more sales power in 1961! Why settle for a pop gun when you can have an arsenal? Contact Typhoon today for complete information and a brand new Reference Wall Chart of the 1961 Line. Use the collect telegram in this ad, or call or write us.

WESTERN UNION
TELEGRAM

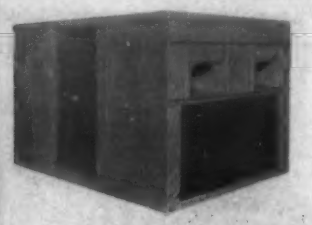
Collect

Typhoon Air Conditioning Division,
Hupp Corporation
505 Carroll Street
Brooklyn, New York

Rush me full details on a Typhoon distributorship.

(your name and address)

TYPHOON
HUPP



Air Cooled Self-Contained
Units 3 to 30 Tons

COMPLETELY AUTOMATIC year-round control is one feature of Trane Co. 2-ton air-to-air heat pump designed primarily for residential application. Here G. H. Deyo of General Controls Co. goes over control operation with R. Clayton of Trane.

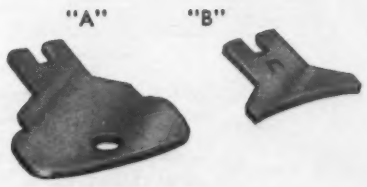
PACKAGE UNIT WITH ELECTRIC resistance heating is this 20-hp condensing unit model with 43 kw of resistance heating, and built-in evaporative condenser, shown by Cool Heat Div. of Drying Systems, Inc.

25-TON ROOF MOUNTED air conditioner introduced by Governair Corp. has its humorous side for C. K. Fitzgerald (l.), Governair vice president, who shows the unit off to E. O. Ponder of U. S. Gauge Co., while William H. Hollingsworth, Governair engineer in Philadelphia (r.) looks on.

ELECTRO-FLO HEAT PUMP offered by Stewart Warner Corp. captures the interest of model Vivian Devine, who picks up pointers from Stanley W. Glenn (center), S-W district sales manager in Michigan, while Robert Bundy of Bundy Plumbing & Heating, Plainfield, Ill., looks on.

FOR APARTMENT HOUSE installations American Furnace Co. offers this compact year-round system with a 16,000 or 22,000 Btuh cooling unit and gas or electric 45,000 or 70,000 Btuh heating system. Walter Weiss and Bill Strauss point out some of the features.

FEDAIR remote fan coil unit earns close study by T. L. Arnold, sales manager, heating division, Fedders Corp., and Joe West, Heating & Cooling Products, Fedders distributor in Chicago.



How settings are locked

Where it is desirable to lock settings, installer removes cover and pushes out factory-installed key "B" from each adjusting knob. This disconnects knob from adjusting shaft. Then, user may insert special key "A" (supplied for key chain use) through knob slot and turn to make desired settings . . . remove key and thermostat is locked as adjusted.

Take your choice...heating, cooling or heating-cooling...each features unique, easy-to-use, locking-type knobs

Here's the line voltage thermostat that has "everything" desired for accurately controlling temperature in motels, schools, offices and similar installations.

It has easy-to-read temperature and function selector dials. It has an accurate bimetallic thermometer with vertical dial. It has exclusive, locking type adjusting knobs, attached to cover but connected to adjusting shafts by factory-installed "keys" within the knobs. It has a unique, built-in but concealed adjustable high limit stop for temperature dial. It has an unusually sensitive element and mechanism which provide low operating differential at all voltages and all amperages within its rating. It has easiest "field wiring" ever...simply connect to large terminals *on back of thermostat.* And, it has modern "thin-line", compact styling. Learn more about this new thermostat...write to the Penn factory for Bulletin 3233.

PENN CONTROLS, INC. Goshen, Indiana

EXPORT DIVISION: 27 E. 38th ST., NEW YORK, N.Y.

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

Editorial

Freeze-drying—*(continued from page 1)*

When something as apparently sensational as freeze-drying turns up, extreme reaction is generated at diametrically opposed poles. There is always the group which sees the new technique as wiping out overnight present technology; and there is always the group which says it will never work.

Keeping this in mind, it is significant that the English — who have more experience with freeze-drying than we have — ask and answer the question this way:

"Does this progress mean that in a short time freeze-dried foods will become a major competitor to frozen foods?" asks W. B. Gosney, editor of England's *Journal of Refrigeration*.

His answer: "Except possibly for certain foods, the immediate answer to this question would seem to be no. . . . Though certain goods such as freeze-dried milk will be accepted readily, only a revolution in taste could lead to widespread consumption of dried meat and fish."

The feeling is the same in Germany and in Europe where freeze-drying plants are being used chiefly for the preparation of small pieces of meat and vegetables for soup powders. Opinion is that the use of freeze-drying on "pure products" such as steaks, chicken, whole vegetables, fruits, and fruit juices will go much slower.

NEWS readers, especially those involved in commercial refrigeration, are concerned over the impact of February *Reader's Digest* article on freeze-drying. Knowing that we were already preparing a discussion of the subject, several asked that we comment now rather than later on this new preservation technique and evaluate its threat to conventional refrigerated storage and handling.

(Most presently available freeze-dried foods are for military use and for special consumers like hunters and explorers, where weight and refrigeration-free storage are disproportionately important.)

It is important to realize that there are about six types of freeze-drying plants for the food industry. The processes differ chiefly in the amount of water finally removed from the product and the temperature at which the water is removed.

If the product is not completely dehydrated, it remains necessary to store it at low temperature. There is the problem, too, of appearance and quality of foods which are dehydrated to varying degrees.

The cost of freeze-drying is much higher than deep freezing.

Those are the highlights. What do they mean?

First, commercial refrigeration should not consider the higher cost of freeze-drying as an indication of non-competition. In every field of technology, initially high costs have come down drastically when industry or consumers decided that they wanted a certain product.

Second, there is bound to be some impact on present methods of handling and storing fresh and frozen foods. It does not seem to us that the impact will be of an *either-or* dimension; more likely, it will mean a shifting of direction; some food preservation will go to freeze-drying; other foods will remain with refrigerated handling; and some foods not yet handled as frozen foods will be.

Third, in spite of the publicity which always accompanies the first public awareness of such a new phenomenon, the state of the art of freeze-drying is not yet such that it can reliably produce the mass items it must produce in order seriously to affect present food handling procedures.

Its effect, however, will be much greater than the now dead irradiation technique suggested a few years ago.

Fourth, there is quite a difference between instant coffee and instant steak. The freeze-drying people have one great selling job to accomplish.

Conclusion?

Freeze-drying offers an evolutionary, not a revolutionary, concept of food handling. The process will be perfected and extended to the consumer market over the years. But for the next decade, at least, there is no need for commercial refrigeration manufacturers and distributors to look for another job.

What Is FREEZE-DRYING?

Despite its adverse effect on the taste and appearance of food, drying has been used for centuries as a method of food preservation. In World War II, millions were first exposed to the nondescript mass of powder called eggs or potatoes.

Freeze-drying, on the other hand, removes the moisture from foodstuffs without affecting their appearance to any degree and without seriously impairing their taste.

In freeze-drying, the food is first refrigerated then placed in a vacuum. In the vacuum, the frozen water, ice, sublimes—passing off as a vapor without going through the liquid stage at all.

The vapor is removed by condensing it on cooling coils. The food is then heated to finish the drying. Newer techniques permit the application of heat to the food as the vacuum is applied, an important development since before this it took from 24 to 36 hours to produce freeze-dried foods. No reliable figures are available on the time required by newest techniques.

According to one source, if some of the water is removed before freezing, the cost of the process is reduced, but at the expense of quality.

When the entire freezing is done by the evaporation of the food's own water, the cost is larger than ordinary freezing without dehydration because the remaining ice, to be evaporated, requires 1,200 Btu/lb in addition to that already needed during freezing.

Instead of using refrigeration to condense the water vapor, some processes carry the vapor out with steam ejectors.

Temperatures involved in the process are about -40°F before placement in the vacuum, from +14° to -5° to drive out the frozen moisture.

At least one manufacturer of freeze-drying plants claims units capable of producing 50 tons of freeze-dried foods a day—enough for the meat supply of "an average large town."

The same manufacturer claims a technique which greatly reduces the germ count in the freeze-dried foods.

Before being used, freeze-dried foods are briefly moistened. Within seconds they soak up the amount of moisture equal to that removed during the freeze-drying process. The foods retain their original shape, color, and aroma.

The major advantages claimed for freeze-dried foods:

1) Refrigerated storage is not necessary. Sealed in plastic or metal, the freeze-dried food will last indefinitely.

2) The weight of the food is greatly reduced. A half-pound steak freeze-dries to a quarter-pound sponge; cabbage is 90% water; a two-ounce pack of freeze-dried carrots will feed 16 people when they have been hydrated. Transportation costs drop considerably. Think of the importance for space travel.

3) For some foods, freeze-drying is apparently the best method of preservation.

Some sources claim that more than 100 foods have successfully been freeze-dried. Only a very few of these, however, have been produced on any but a laboratory scale.

OFF THE CHEST

Pinnell Heating & Air Conditioning, Inc.
Augusta, Ga.

Editor:

I read with interest the article in the Jan. 16 issue entitled "Michigan Attorney General Baffled by Decision on Registration Law."

Let us hope that more people outside the South will pull their heads out of the sand and call, write, wire, or visit their congressmen and urge passage of legislation to halt the usurpation of States Rights.

Of particular interest was the paragraph and I quote "A question raised by the opinion is this: what happens when a Federal Judge says a state law is unconstitutional?"

It doesn't take a mental giant to figure out the answer. Just ask any school age child in Arkansas, Louisiana, or Georgia to name a few. They can give you the answer.

JOSEPH M. PINNELL,
President

Virginia Smelting Co.
West Nortfolk, Va.

Editor:

You seem to possess an uncanny judgment for putting your finger on subjects that are of top current interest. I have in mind, particularly, your series on "Refrigerant-22: Hero or Villain?"

Any chance of getting reprints for distribution to all our field men?

ROLLIN H. ISRAEL,
Manager
Refrigeration Sales Dept.

EDITOR'S REPLY: We reluctantly admit that our editorial judgment is superb! Besides that, Mr. Israel, the real reason we know our readers and their needs so well is that our staff is forever in the field. You will recall having run into us at all sorts of affairs—big ones and small ones where no other publication was present. Thus it will always be. Reprints of the Refrigerant-22 series are being prepared.

AIR CONDITIONING HEATING & REFRIGERATION NEWS
F. M. COCKRELL, Founder

'The Conscience of the Industry'

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From the Files of the News

25 years ago . . .

Frigidaire's 1936 refrigerator line featured the "Metermiser," a new hermetically sealed rotary compressor, and a 5-year protection plan. . . . The Hays, Kan. area has its first completely air conditioned home—a General Electric "New American" home, and a G-E dealer's "open house" for the area attracted over 2,000 people in one week.

The NEWS editorial, "A Way To Promote Air Conditioning," points out that the air conditioning industry needs "leadership," just as refrigeration needed leadership in 1926. Refrigeration industry leaders organized a dynamic advertising program, and its sales appeal was "pride of ownership." The NEWS suggests a similar "organizing" of the air conditioning industry, to "bring all the discordant elements together" to determine what sales approach would best inspire **"public confidence"**—which is what the industry most needs.

A reader writes that the term, **air conditioning,** is being misused and that many so-called air conditioned residences have no humidifying or dehumidifying systems at all. He suggests that "if there was some way of educating the public in what air conditioning really consists of and its value for health and comfort, it would smooth out most of the rough spots in the business." . . . A Phoenix department store reports a business increase of 30% due to a $20,000 air conditioning system.

A movie director admits to using air conditioning to evoke proper emotional responses from his actors—low temperatures for tense scenes and humid temperatures for love scenes, which he says produces a "land of the lotus eaters" effect! . . . A Detroit roller bearing plant finds its air conditioning system essential because bearings held in close tolerances during machining operations are now fully protected from unnecessary temperature changes, excessive humidity and dirt. . . . The NEWS' 1936 MASTER SERVICE MANUAL is "off the presses," featuring the hows, whats, and whys of refrigeration systems and 240 some pictures, diagrams, and drawings.

10 years ago . . .

Addition of a new 11-ton packaged air conditioner has been announced by Chrysler's Airtemp Div., features include a sealed radial compressor which operates at 3,500 rpm, and a cooling capacity of 132,000 Btuh. . . . Detailed selection, operation, and maintenance data for the plant engineer responsible for dust control is contained in the book, "Industrial Dust Control Through Exhaust Systems," now being offered by Pangborn Corp.

Carrier Corp. has eliminated some air conditioner models to keep its new lines within government defense limitations; the company's 1951 line will include, in part, three instead of six room air conditioner models. . . . Use of aluminum in heating, ventilating, and air conditioning ducts is prohibited after June 30 of this year.

A copyrighted device for selecting room air conditioners to suit the particular needs of each prospective user has been designed by H. L. Laube, Remington Corp. president. . . . An Oklahoma City air conditioning salesman has asserted that drive-in movie theaters are excellent air conditioning markets and cites projection booth areas and refreshment areas as primary areas for such controlled air systems.

"The average city lot is too small" to supply enough heat to a ground coil for operating a heat pump, contends a U. of Washington professor of electrical engineering, who feels that there has been too much optimism in heat pump thinking and too much carelessness in designing installations. . . . "Average prices" for refrigeration service in New York City were presented by the NEWS after results of their survey made among service firms were compiled, and comparisons of 1950 prices to 1948 prices showed a marked increase over that two-year period.

For Your Reprint Copy
"Emergency Diagnosis, Repair of Hermetic Unit Electric Components," by John L. Zant, mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort, Detroit 26, Mich.
Only 25¢ each.

World Trade Corner

HUSSMANN REFRIGERATOR CO., St. Louis, Mo., reported that its licensees in Australia, England, France, and Mexico "all enjoyed an excellent year in 1960. General utilization in the principal highly developed countries in the world of American type supermarkets and superettes is making great progress."

* * *

CONTROLS CO. OF AMERICA, Schiller Park, Ill., announced the reorganization and expansion of its operations in Argentina. The Argentine company recently acquired the business of Controlec, a controls manufacturing company in Buenos Aires. The combined operations have been integrated under the management of Esteban Monti and Hector Bacigalupo, who together had built up the business of Controlec.

* * *

EMERSON RADIO & PHONOGRAPH CORP., Jersey City, N. J., has entered into a licensing agreement with Amcor, Ltd., of Tel Aviv, Israel. Emerson is to furnish engineering and technical assistance and know-how to Amcor in its manufacturing operations for the production of the Emerson lines of air conditioners, TV receivers, and transistor radios in Israel. A program is being prepared for the introduction of the Emerson lines in Israel as well as in several export markets.

* * *

IMPERIAL - EASTMAN CORP. (CANADA) LTD. has announced that it will shortly begin construction of a 23,000-sq ft plant and office building in Barrie, Ont. John Grant, of Toronto, retiring president of Imperial's Canadian operations, will continue as sales agent of the company's products. Charles McNellis, who has been plant supervisor of Imperial's Chicago plant, was appointed vice president and general manager of the new operation.

* * *

AMERICAN-MADE air conditioning and refrigeration equipment was demonstrated to the Ceylonese during a 30-day official U. S. Small Industries Exhibition in Colombo, Ceylon. Cooperating with the Office of International Trade Fairs, U. S. Dept. of Commerce, in staging the exhibition were Tyler Refrigeration Corp., Amana Refrigeration, Inc., Hupp International Div., Hupp Corp., and other American firms.

* * *

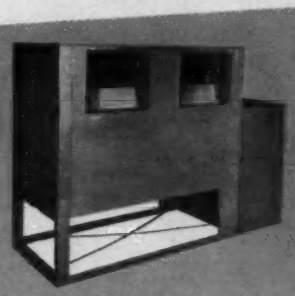
WALTER S. BOPP has been appointed to the new post of vice president and general manager of Philco International Div. of Philco Corp.

a brand new
PROFIT MAKING LINE
of Commercial air-cooled
split systems FOR YOU!

Air Conditioners
MODELS FROM 7½ TO 20 HP. MULTIPLES FOR HIGHER RATINGS

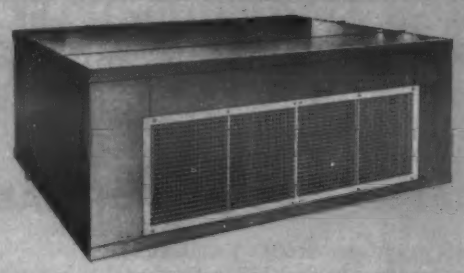
CONDENSING UNIT
Rugged • Quiet • Weatherproofed • Diagonal coil for minimum plan area • Controls wired and enclosed • Compressor section may be detached • Designed for outdoors.

Heat Pumps
MODELS FROM 7½ TO 20 HP. MULTIPLES FOR HIGHER RATINGS



CONDENSING UNIT
High cfm., low sound level, Blower type fans • High capacity coil • Greater flexibility in equipment location • Supplimentary heaters if required.

Horizontal Air Handlers



Sizes to match Condensing Units • For remote installation with ducts or with plenum and 4-way grille as optional extra • Large coil face area for low air velocity and low sound level.

12 YEARS AND OVER A MILLION UNITS
of air conditioning and refrigeration systems have provided the experience behind this Commercial Line. Since 1949 our facilities have expanded each year to where we now have more than 230,000 square feet of manufacturing area. Addison's know how, experience and fully equipped plants are your assurance of quality products.

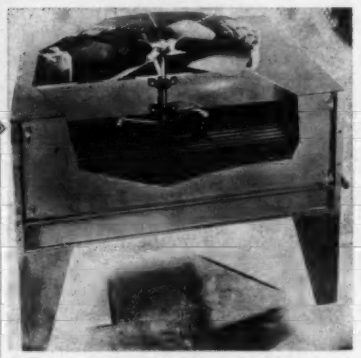
ADDISON PRODUCTS COMPANY
ADDISON, MICHIGAN · PHONE LINCOLN 7-1200

ROOF TOP AIR CONDITIONER with complete gas fired furnace and side air discharge was exhibited by Welbilt Air Conditioning and Heating Corp. J. E. Craig (l.) examines the 7½-ton unit with the firm's representative in Atlanta, V. P. Warren. The self-contained unit features manual or automatic control.

NEW MONCRIEF 20 kw electric air conditioning furnace of 69,000 Btuh capacity is shown by Tom Chatwood, (l.), Henry Furnace Co. sales representative, to Charles A. Jensen, of Albert O. Jensen, Wholesale Furnace & Supply Co., Omaha.

NEW MODEL 120AC condensing unit (background) and matching horizontal air handler (foreground) will be merchandised under the Addison label. R. E. Dyas (l.), sales manager for appliance products, Addison Products Co., discusses sales plans with T. H. Smoot, central sales manager.

WHISPAIR HEAT PUMP that hangs on the outside wall is shown by W. B. Cott of the Westinghouse Air Conditioning Div. to L. Wilcox and R. Hedrich of Columbus, Ohio.

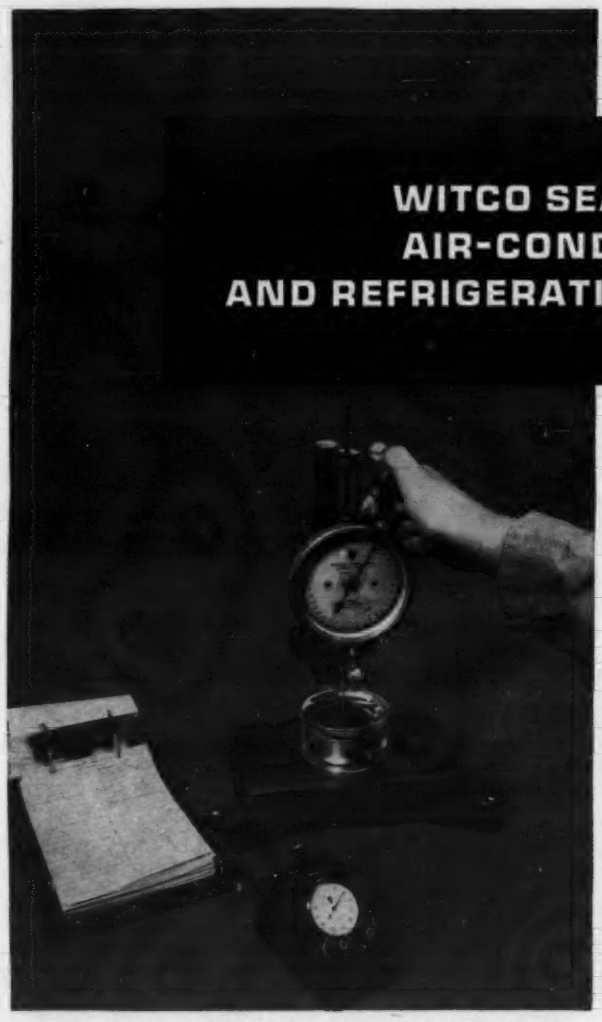


ONE OF SIX models of remote air-cooled condensers offered by Bohn Aluminum & Brass Corp. ranging in capacity from two to 120 tons. They are available with either vertical or horizontal discharge.

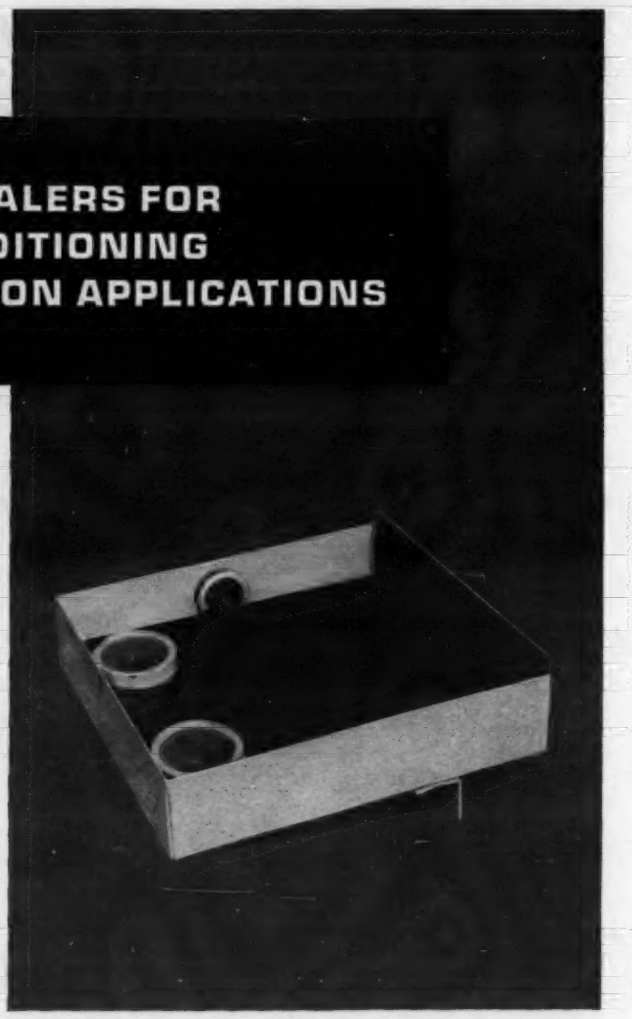
CURVED BLADE DIFFUSERS introduced by Air Control Products Co. catch the attention of Joseph Chalpin (l.) of Condea Supply Co., New York City, who gets the details from Robert S. Clapp, Air Control district sales manager.

THERMOELECTRIC generator, indicated by Clarence Grandstaff, chief applications engineer for C. A. Olsen Co., powers the blower on this new Luxaire gas-fired furnace. Generator, rated at 130 watts, converts heat of burning gas directly into electricity.

WITCO SEALERS FOR AIR-CONDITIONING AND REFRIGERATION APPLICATIONS



Careful testing of all Witco products means uniformity and high quality for you. Here, a lab technician checks a sealer with a penetrometer. This and many other tests check every characteristic that is vital to performance. Every sealer shipped must meet Witco's high standards and perform faultlessly for you.



Witco's sealers and vapor barriers are specially designed for air-conditioning and refrigerating applications. Good flexibility and excellent adhesion are exhibited over a wide temperature range (from below freezing to abnormally hot temperatures). Formulations to meet special application requirements are manufactured to customer order.

WITCO PRODUCTS ASSURE TOP QUALITY AND PERFORMANCE

Providing products especially suited to particular jobs is just one way Witco assures top performance. Take Witco's Plastic Sealer 320, for example. This material is an all-purpose sealer used where hard, dry films are required. It is stainless, tasteless, odorless and forms air-tight, positive seals.

Pioneer 14442 is a hot-applied sealer with odor level and moisture resistance that make it ideal for refrigerators, freezers, food-vending machines and water coolers. Pioneer 2205 also can be used in these applications. It is a high-melting-point sealer and retains high cold flow and flexibility at low freezing temperatures; it also assures good adhesion and excellent sealability.

The big reasons behind Witco Products' superiority are research and quality control. Every Witco Product is produced under the kind of strict laboratory quality control that assures uniformly high performance from shipment to shipment, year to year.

Witco's research laboratories and technicians not only develop new and improved products, but are available to help you with special problems. Write or call the nearest Witco sales office listed below for further information about these products and for information on sealers for other specialty applications.

SEE OUR CATALOG IN SWEET'S

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PIONEER PRODUCTS DIVISION
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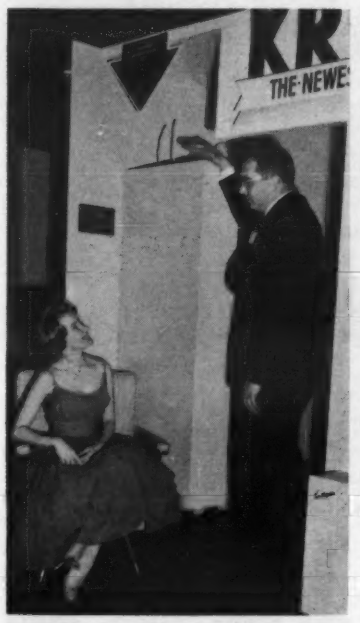
Sales Offices: New York • Chicago • Los Angeles • Toronto and Montreal, Canada

More Products Exhibited At Chicago Exposition

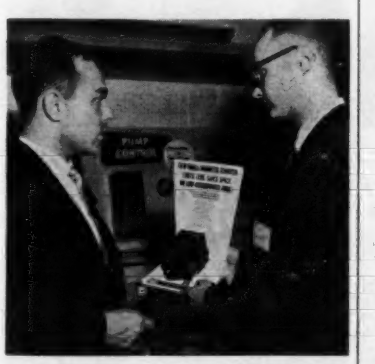


"ROOM DIVIDER" is the name chosen by Kritzer Products for its unique conception of a cooling-heating convector which is available with 9 to 12,000 Btu capacity on cooling and 22,500 to 30,000 Btu heating (hot water). Here R. W. Kritzer, Jr. indicates air outlet to Sharon Raye.

REVERSING VALVE for large capacity heat pump systems is the new "CR" model introduced by Chatleff Controls, Inc. and being described here by Carl A. Olson (l.), Chatleff vice president, to Robert Schultz, Minneapolis, and W. C. Johnson, Los Angeles.

40-TON GAS-OPERATED TRANE CONDENSING unit, also available as a complete chiller package, is shown to Guy Hall (l.) of the Florida Power Co., St. Petersburg, by Norbert Hall, sales manager for Ready-Power Co. Ready-Power also introduced units employing Carrier compressors.

WATERMAN - WATERBURY "Comfortrol" by-pass heating and air conditioning unit which by-passes some of the return air around the furnace mixing chamber and mixes hot and cool air in the plenum for even temperature air to rooms is flanked by L. J. Reay (l.), Waterman-Waterbury president, and Stuart A. Smith, executive vice president and general sales manager. Unit provides 3 to 5 tons of cooling.



SMALL MAGNETIC STARTER that is said to cost less and save space on low horsepower jobs is shown to Ralph Breisch (l.) of Copeland Refrigeration Corp. by C. A. Metz, application engineer for Square D Co.

MARLEY DRICOOLER condenser with ADB pre-cooler, which is claimed to level dry bulb peaks, captures the interest of Fred J. Kroger (l.), Main Line Supply Co., Dayton, who gets details from Marley Co. sales engineer at Cincinnati, Donald Barrington.

"PEE-WEE" COMPRESSOR is the official designation given to the Danfoss unit held by Tom Ford, vice president and general manager of Danfoss, Inc., new U. S. firm which will produce units in New Jersey. At left is Danfoss engineer A. Enemark. The high speed (3,400 rpm) compressor weighs about 18 lbs.

ALL PRICES CUT!

NOTHING'S CHANGED BUT THE PRICES! STILL THE SAME FINE PRODUCTS! STILL THE INDUSTRY'S MOST COMPLETE LINE—AMERICAN-STANDARD!

American-Standard Air Conditioning Division has reduced prices on every unit in its warm-air heating and air conditioning line. This gives American-Standard Dealers the most powerful competitive position in the business—an opportunity to match them all on price and beat them all on quality! You can make the upcoming cooling and heating seasons the most profitable ever. Contact your American-Standard Air Conditioning Division Distributor for his new, low price list. Call him today!

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AMERICAN-Standard
AIR CONDITIONING DIVISION

Shown In Chicago

GATHERED AROUND Clarage Fan Co.'s new "Twinalator" combined supply and exhaust fan introduced at the show are (l. to r.) E. J. Kothera of Young Radiator Co., and Clarage officials Peter Vanderhorst, supervisor; N. A. Meltzer, manager of industrial sales; S. H. Downs, vice president; and (r.) R. A. Wasson, president.

RADICALLY different configuration of fins for coils, claimed to improve performance and offer other advantages, is displayed here by Jeanette Badich and Mel W. Knight of Peerless of America.

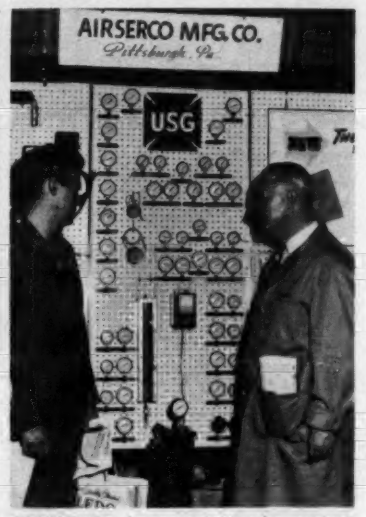
ALCO FILTER-DRIERS
ALCO ADK DRI-KLEANER
Mr. ADK Says:
The one and only porous block silica gel PA 400 filter drier fortified with molecular sieve

SHOWING ALCO Valve Co.'s new ADK "Dri-Kleaner" filter drier to Nevin Day of N. W. Day Supply Co. (center) is Al St. Germain, Alco field engineer (l.). George Boepple, Alco director of sales looks on. The Dri-Kleaner is said to remove moisture, foreign materials, acids, and sludges.

ALL WRAPPED UP in their work are Lochlin G. Syme (l.), advertising manager, and Robert A. Watkins, regional manager for Flexible Tubing Corp. Helping them demonstrate Thermaflex air conditioning duct is Pat Lee.

ALL electrical characteristics as well as compressor capacity of hermetic units can be analyzed on this Airserco unit; Tom Pendergast (center) of Warranty Service explains how to a couple of show visitors from Iowa: Eph Bengston (l.) of Republic Refrigeration Wholesalers, Davenport, and Fred E. Knoll (r.) of Winterbottom Supply, Waterloo.

SPECIAL tubing used on such items as pressure controls was "front and center" at the Wolverine Tube booth, observed John Spence, education director of Refrigeration Service Engineers Society, and Jim Downs, Cleveland wholesaler.



SERVICEMEN in any field who suspect some troubles may stem from low or fluctuating voltage can pin down facts with the 31-day recording voltmeter which handles either 115 or 230 volts in single or three phase, claims E. C. Williams (r.), Airserco president, in describing instrument to Joseph Walus and Robert Schmidt of Heat Engineering Co., contractor in Western Springs, Ill.

FURNACE HUMIDIFIERS in two types, the new V-5 with evaporator plates of "Magnasil" with exclusive lime filter at right, and an electric type (center) were featured by Viking Air Products Div., Lau Blower Co.

NEW SMOOTH-FINISHED but flexible "Cell-Tite" tubing insulation produced by B. F. Goodrich Co. is being demonstrated by P. J. Keeley (right) of the company to Charles Cari, Chicago distributor.

"DIAL-A-CHARGE" refrigerant charging cylinders for "on-the-spot" use in field were introduced by Robinair Mfg. Corp. in 40 oz and 5 lb sizes. Device is said to make possible recharging of a system to within plus or minus ¼ oz of prescribed amount of refrigerant.

FACTORY SERVICE REPRESENTATIVES

Whirlpool Corporation needs service representation for coin-operated laundry and dry-cleaning equipment in all corners of the country. This is an excellent opportunity for well-qualified men to join a growing division of a substantial company. Service experience essential, dry-cleaning equipment service desirable. Applicants must be able to solve problems, train servicemen, and operate as a member of a management team. Salary will depend on qualifications and experience. Excellent bonus and benefit program. Please send resume of qualifications and salary requirements to Sheldon Lee, Dept. ACHR-2, Whirlpool Corporation Administrative Center, Benton Harbor, Michigan.

Many of the photographs appearing on these pages were taken by Austin Jones, Kerotest Mfg. Co., who has been photographing industry shows and other industry events since the 1930's.

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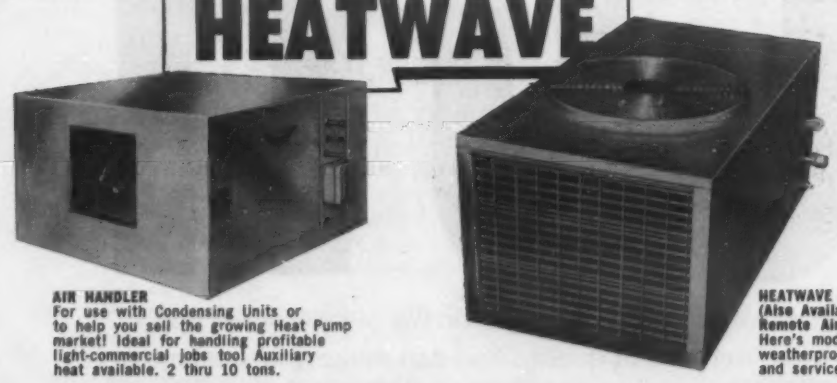
NEW! AIR CONDITIONING

HEATWAVE



THERE'S A NEW "PROFIT-PLUS" PROGRAM FOR YOU THIS SEASON!

Now Heatwave offers you more PROFITS, plus a completely expanded NEW line! You'll find everything you need to close more sales in air conditioning this season. Start making more sales, more profits now with the line that gives you heating and air conditioning models to sell both residential and light-commercial installations. Write or call collect today!

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For use with Condensing Units or to help you sell the growing Heat Pump market! Ideal for handling profitable light-commercial jobs too! Auxiliary heat available. 2 thru 10 tons.

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Packaged Multi-Zone Air Conditioners

How One Manufacturer Goes About Designing New Line (5)

How does a manufacturer go about designing a new line of air conditioners? What factors are considered in the selection of components like compressors and coils, evaporators and controls? How much weight is given to design considerations, to application engineering?

In this series of articles, Alfred D. Sullivan, development engineer for American-Standard Industrial Div., offers a lucid account of the birth of a new product.

By Alfred D. Sullivan, Development Engineer, American-Standard Industrial Div.

System Controls

The external controls for a multi-zone or dual duct unit are responsible for hot deck and cold deck temperatures, quantity and temperature of fresh air, and operation of the dampers which admit heated or cooled air to the various conditioned areas. They may control the compressor unloaders if coil temperatures must be held more closely than response to dropping suction pressure will afford.

Electric and pneumatic control systems each have their adherents. The pneumatic type is schematically shown in Fig. 8, taken from the sketch of one manufacturer. About anything it does can be duplicated by standard electric controls.

External Damper Control

Following through the operation as shown in Fig. 8A, the mixed air thermostat regulates the amount of fresh air and return air so that their mixed temperature is 50° during the heating season. The outside air thermostat closes the fresh air damper if outside air exceeds 75°. The solenoid valve is wired across the fan starter. When the fan stops, the return air damper is opened wide while the fresh air damper is closed.

Heating Control

The admission of steam to the heating coils is controlled by the throttling valve in accordance with the setting of the hot plenum thermostat (Fig. 8B). This setting is changed by action of the outdoor thermostat as the outdoor temperature fluctuates. Thus, a decrease in outdoor temperature is promptly followed by a rise in temperature of the hot plenum.

Cooling Control

The temperature of the cold plenum can be held at 60°, for example, by the plenum thermostat (Fig. 8C). This thermostat can be overruled, however, by the low limit control set at 50°. Above 50°, plenum temperature is held constant by successively unloading compressor cylinders and finally by cycling the compressor through the pneumatic-electric switch.

Conditioned Areas Control

Each conditioned area is provided with a thermostat to control opening and closing of one of the damper sections (up to 19 sections on the 40-hp unit), attached to the outlet plenum of the conditioner (Fig. 8D). The hot deck dampers close as those on the cold deck open and hold any intermediate position between the extremes, as dictated by the load on the conditioned space.

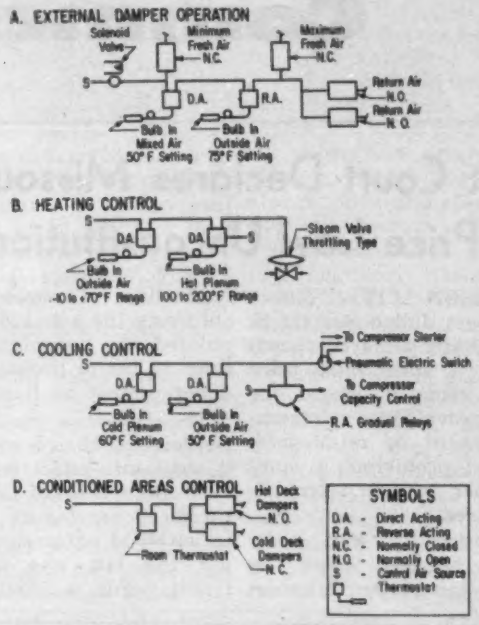
It can be seen that floor area, performance, and adequate safety devices are the major criteria that determine selection of combination heating-cooling apparatus.

Although conventional packaged air conditioners are capable of handling both heating and cooling assignments, only the multi-zone unit has the ability to perform both functions simultaneously.

The packaged multi-zone air conditioner as herein described is a new concept in the "pure" meaning of the term. With all it has to offer the industry, it is reasonable to predict that it should be here to stay.

(The End)

Fig. 8—System Controls—Multi-Zone Unit


A. EXTERNAL DAMPER OPERATION
Solenoid Valve
Minimum Fresh Air N.C.
Maximum Fresh Air N.C.
Return Air N.O.
Return Air N.O.
D.A.
R.A.
Bulb in Mixed Air 50° F Setting
Bulb in Outside Air 75° F Setting
B. HEATING CONTROL
Steam Valve Throttling Type
Bulb in Outside Air -40 to +70° F Range
Bulb in Hot Plenum 100 to 200° F Range
C. COOLING CONTROL
To Compressor Starter
Pneumatic Electric Switch
To Compressor Capacity Control
R.A. Gradual Relays
Bulb in Cold Plenum 60° F Setting
Bulb in Outside Air 50° F Setting
D. CONDITIONED AREAS CONTROL
Hot Deck Dampers N.O.
Cold Deck Dampers N.C.
Room Thermostat
SYMBOLS
D.A. - Direct Acting
R.A. - Reverse Acting
N.C. - Normally Closed
N.O. - Normally Open
S - Control Air Source
Thermostat

Trying to find the right man for a hard-to-fill vacancy—the NEWS' Classified Ads are read by your man.

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PEERLESS AQUALINE® Pumps are available in sizes to 8-inches. Capacities to 2600 gpm, heads to 280 feet. Temperatures to 250°F. Horizontal split case design allows quick inspection without disturbing piping.

PEERLESS FLUIDYNE® Pumps are compact end-suction design. Redi-Packed in 22 sizes from 1 x 2 x 6 to 2½ x 3 x 10, for immediate shipment. Heads to 230 feet, capacities to 300 gpm, motors from 1 to 15 hp.

If there is a key word to describe Peerless Pumps, that word is QUALITY. You'll find it in the way the pumps are designed. You'll find it in the way the pumps are made. And you'll find it most apparent in the way these pumps operate. Remarkably long trouble-free operating records are routine with these better-made pumps.

But QUALITY is just the start of a long list of important features that recommend the Peerless AquaLine and Fluidyne line of pumps for your water handling jobs. There's immediate availability from ready-to-ship stocks. Complete hydraulic coverage for every type of application. Compact streamlined design that gives you space-saving good-looking layouts. And fast, on-time service from a network of warehouses and field offices.

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Putting Ideas to Work

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☐ Bulletin B-2100 on Peerless AquaLine Pumps.
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What's Going On in Commercial Refrigeration

News of Markets, Products, Methods

Circuit Court Declares Missouri Milk Price Law Unconstitutional

JEFFERSON CITY, Mo. — Circuit Court Judge Samuel E. Semple recently declared unconstitutional a state milk price law that made it illegal for dairies to provide free refrigeration equipment to retail milk outlets and prohibited a number of other "unfair" competitive practices.

The Borden Co. won a declaratory judgment and an order enjoining the Missouri Agriculture Commission from enforcing the act. Judge Semple ordered the commission to refund $2,284 in license fees paid under protest by Borden.

The law was challenged by Borden less than a month after it went into effect on Aug. 29, 1959. Borden asked Cole County Circuit Court for an injunction to withhold enforcement, claiming the law was unconstitutional, vague, indefinite, and impractical of application. Intent of the legislation was to prevent big dairies from invading territories of smaller ones by selling milk below cost.

Borden argued that the Agriculture Commission could not properly evaluate actual costs, despite modern accounting equipment and techniques, and it challenged provisions prohibiting price discriminations, discounts, rebates, free services, advertising allowances, financial aid, and free equipment. The law also required operators of processing plants to pay licensing fees.

Ross-Temp Regional Managers See 1961 Ice Machine Line

CHICAGO — At the annual Ross-Temp sales meeting recently held at the factory, the new 1961 line of Ross-Temp flaked ice machines was shown to regional managers by John H. Seippel, sales manager, and merchandising plans for the coming year were announced.

Features of the new line included improvements on self-contained models to facilitate ease of drink dispenser installation. Modifications of design were shown which will increase the life of the flaked ice machines, it was stated.

A product seminar was conducted by Sigmund Stanis, manager of research and development, and Joseph A. Zauner, national service manager.

NCRSA Convention Dates

PHILADELPHIA — The 15th annual convention of the National Commercial Refrigerator Sales Association will be held at the Riviera hotel, Las Vegas, Nev., Oct. 8-11.

Hussmann Sales for 1960 Reported As Second Highest In Firm's History

ST. LOUIS — Hussmann Refrigerator Co. reported that net consolidated sales for 1960 totaled $38,888,649, compared with $40,642,847 in 1959, a decrease of 4.32%. However, 1960 sales were the second largest in the history of the company.

Net consolidated earnings were $2,260,387, compared with $2,811,307 earned in 1959. The earnings were equivalent to $1.70 a share on the 1,332,740 shares outstanding Dec. 31, 1960, compared with $2.15 on the 1,306,608 common shares outstanding at the end of 1959.

The annual report to stockholders by W. B. McMillan, chairman of the board, and John R. Caulk, Jr., president, noted that "1960 sales of equipment for food stores were almost exactly the same as such sales in the record year 1959, the reduction of total sales of the company being due to inclusion in 1959 of sales of our Aircraft Div., whose operations were completely terminated that year."

"Profits for the year," it was pointed out, "were adversely affected by the direct and indirect charges arising from the additions to facilities and many rearrangements and adjustments in other facilities to better reduce and control cost of manufacturing. Research and development expenditures were at a record level."

NCRSA Enrolls 9— 2 From Europe

PHILADELPHIA — The National Commercial Refrigerator Sales Association has announced enrollment of nine new members, including one in West Germany and one in Holland. They are:

Allied Distributing Co., Inc., Joplin, Mo.; F. C. Cantrell Refrigeration, Inc., Dallas; Fager Commercial Refrigeration Co., Dayton; Kaeltetechnik & Aircon G.m.b.H., Mainz, West Germany; Koeltechnisch Bureau, Fri-Jado, N. V., Breda, Holland; McDonnell's Equipment Co., Van Nuys, Calif.; Market Engineering Co., Inc., Albuquerque, N. M.; Nor-Tex Store Engineering, Inc., Dallas; and Standard Agencies, Ltd., Montreal, Que., Can.

Allison Elected Amcoin President

LONG ISLAND CITY, N. Y. —Ernest B. Allison has been elected president of Amcoin Corp., replacing Arthur B. Segal who moves up to chairman of the board.

E. B. Allison

At the same time, the company announced, the Amcoin product line is being expanded to include ice makers, carbonated drink dispensers, bar dispensing equipment, and related items.

Amcoin will continue to manufacture its regular line of coffee making equipment as it has since 1925, the announcement said.

Allison is returning to the beverage dispensing business after an absence of four years. Since 1956 he has been president and treasurer of the Gilbert Cummins Co. in Baltimore and Adams Industries in Easton, Md. These companies fabricated tubular steel for the furniture industry.

Bastian-Blessing Plans Stockholders Vote on Common Stock Increase

CHICAGO — Stockholders of Bastian-Blessing Co., at the annual meeting April 7, will vote on a proposed increase in the authorized common shares to effect a four-for-one stock split.

A proposal by the board of directors calls for the authorized shares to be increased to 1,000,000 from 200,000. Following the split, outstanding shares would number 734,172. The company said it planned to continue annual dividends at the rate of $4 a share on the present stock or $1 a share on the split shares.

DISA Meeting Set For March 9, 10

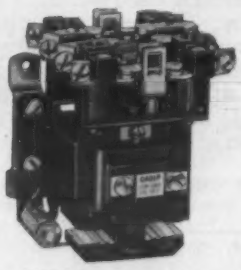
NEW YORK CITY—The 42nd annual meeting of Dairy Industries Supply Association will be held Thursday and Friday, March 9 and 10, at the Barbizon Plaza hotel here, with marketing and regulatory matters receiving special attention.

Congressman Lester Johnson of the Ninth District of Wisconsin, author of H.R. 50, the National Milk Sanitation Bill, will be the lead-off speaker of a special panel on "Regulations, Present and Pending—And How they Affect Dairy Suppliers-Equippers."

On the opening morning of the meeting, a special panel on marketing problems in the 1960's, primarily for DISA firms' marketing men but open to all, has been arranged.

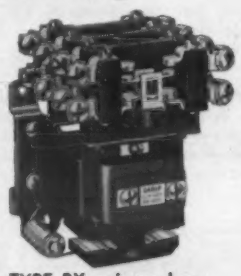
NEW ALLEN-BRADLEY CONTROL RELAYS

• Five times longer life
• Ten times greater reliability


TYPE B general purpose relay with up to 8 poles in various contact arrangements.

With their many new features, these new Bulletin 700 relays provide even more millions of trouble free operations to insure the dependability of your air conditioning system.

The new structural design increases mechanical life *at least 5 times.* A new contact motion provides *10 times* greater electrical reliability. And the price is the same! Send for details today.


TYPE BX universal relay provides both normally open and normally closed contacts.

Allen-Bradley Co., 1313 S. First St., Milwaukee 4, Wis.
In Canada: Allen-Bradley Canada Ltd., Galt, Ontario

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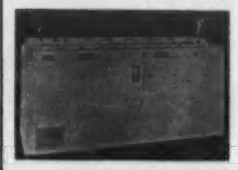
Member of NEMA
Quality Motor Control

BEVERAGE COOLERS


Howard manufactures a complete line of commercial refrigerators and freezers. Priced right, provides more daily sales and profits.

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Tyler Stresses Importance of Good Distributors At Its 3rd International Sales Congress

By Frank J. Versagi

SOUTH BEND, Ind. — "Last year was the best in our history. You distributors played an important part in setting that record, and you have been instrumental in the general growth of our company over the years," President R. L. Tyler, Sr. told his distributors recently at the third International Sales Congress of Tyler Refrigeration Corp.

Indeed, throughout the three-day conference Tyler repeatedly stressed the importance of distributors to the company. He traced briefly the development of "good distribution patterns which exist now" from the time when "hip-pocket salesmen were considered the only way to move our kinds of products."

Operating from a script prepared by E. F. MacDonald Co. of Chicago, Tyler personnel covered all facets of a typical sales meeting by playing roles assigned them as well as playing themselves. Thus, bright, agressive Tom Tyler, recently appointed a director, put on an apron and played the part of a meat cutter as well as taking part in the script as one of Tyler's engineers, which he is.

Interspersed between product introductions and company-distributor business sessions were several well known speakers who added dimension.

Muir Appeals for Correct Sales Concept

On the first day, Thom Muir, executive vice president of Air Conditioning & Refrigeration Wholesalers, gave an oratorical, highly dramatic appeal for the correct concept of selling.

"You men have in common two things," Muir told the Tyler distributors, "product and—to some degree—technical knowledge.

"But you differe in sales approach. Some of you sell hard, some soft. Some of you are quiet, some would be called loud mouths. Yet even though you all differ in selling technique, here too there are things you have in common—the prospect."

Mental Processes That Lead To Purchase

Muir complained that too many salesmen have forgotten that the prospect must go through several mental processes before he is ready to buy.

"First, the **need** must be established. Make your customer see he needs a new walk-in, not a repair job on the broken down one.

"Then tell him what **product** will fill his needs; tell him all about it.

"Third, prove to him that the correct **source** for the product is your company. You know how good your quality, your service, your reputation are. **Tell** him.

"Fourth, establish the **when**; show him that he must buy now. Either to save money or to make more money, the time to buy always is now.

"Fifth comes **price.**

"I'm not going to pretend that price is not a consideration in selling," Muir admitted, "but it is a mistake to make it more significant than it is.

"And it is a great mistake to talk about price before you have guided your prospect through the four preliminary steps."

Muir pleaded with the distributors to drop the word **bid** from their vocabulary. "Use **quote, proposal,** or **job,** but don't say **bid.** The word just brings to the customer's mind the thought to get someone else's price."

Luncheon speaker on the first day was Bob Burback of *Progressive Grover.*

Burback predicted that 2,000 new supermarkets will be built in 1961. In addition, "Thousands of markets will be remodeled."

Carlos d'Empaire, Tyler distributor in Maracaibo, Venezuela, appeared on South Bend television during the company's international meeting. d'Empaire discussed the role of refrigeration in increasing the food supply throughout Latin America.

Spending will total more than $300 million he offered.

Most of these new markets, and the markets to come in the '60s will be 12-15,000-sq ft stores; "Stores will get smaller, not bigger because they will be catering to people willing to drive only a few blocks or a mile or so to shop." While a few hundred giant, super general stores will go in, Burback does not expect them to form more than a tiny minority of store population.

Frozen food sales, which now account for some 4-6% of a supermarket's sales will definitely be a growth item, Burback feels; they will be followed in growth by frozen fresh meats, soft goods, groceries, and health-and-beauty aids.

Although customers are more affluent, more sophisticated and willing to pay for items and services which they never demanded, store operators must improve their merchandising and business operations to make a profit: "One major chain reported its sales up considerably, its profit down 50%."

The commercial refrigeration manufacturer can help the chains and store operators realize maximum merchandizing efficiency from their refrigerated fixtures and store designs, Burback concluded.

Art Perez, chief administrative engineer, introduced the first edition of *Trade Talk,* a monthly bulletin to be issued by the Tyler Technical Staff.

"Trade Talk is going to deal with real down-to-earth stuff; we'll be talking about such things as Btu, installations, service, R-22, line sizing—all in a practical manner which will make it easy to use the information as the core of a service meeting at the local or distributor level," Perez suggested.

(Continued on next page)

Another good reason it pays to sell SCOTSMAN!

This lineup of new Scotsman Ice Machines is undergoing a rigid test run at Scotsman's big plant in Albert Lea, Minnesota. Hour after hour, these Scotsman machines produce hundreds of pounds of ice. During this test, every working part is checked and rechecked to see that every unit is in perfect working order.

Then—and only then—are the Scotsman machines shipped out to the dealer and on to the customer!

This careful attention to the production of Scotsman Ice Machines is only the first link in the chain of Scotsman service. Scotsman backs up its top quality machines with a sales and service group second to none in the industry. And to help you sell Scotsman Ice Machines, a giant advertising and merchandising program promotes faster sales and bigger sales to more and more markets!

Do you qualify for the Scotsman franchise so highly prized in the ice machine industry? Mail in the coupon today and get full information.

SCOTSMAN

Modernize with Modern Ice!

ICE MACHINES

YES! Send me complete information about a franchise for Scotsman Ice Machines.

NAME_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

MAIL TO: **SCOTSMAN ICE MACHINES**
Queen Products Division, King-Seeley Corporation
202 Front Street, Albert Lea, Minnesota
EXPORT OFFICE: 15 William St., New York, N.Y.

Tyler Congress--

(Continued from preceding page)

The first issue treats of cutting and packaging rooms.

Although the professional handling of Tlyer's conference brought general acclaim, easily the most profitable single session during the three days was the Management Meeting held for distributor owners and principals.

Distributor personnel discussed selling, service, and management for profit in three panel discussions, then lively floor discussions took place. The complete story of this management session will appear in a future issue of the NEWS.

Guest speakers the second day were D. Mason, owner of Salesmanship Institute of America and Miss Marie H. Lawton, executive secretary of National Commercial Refrigeration Sales Association.

Miss Lawton mentioned that NCRSA membership is growing; Tyler distributors in the organization now number 50, compared to just over 30 a year ago. The association now has three European members, and two of these are Tyler distributors, Miss Lawton revealed.

One significant fact which Miss Lawton mentioned in passing was a study which shows the average distributor spends 0.84% of sales on advertising.

She listed the advantages of membership in the organization for those distributors present who are not already members and showed the numerous specialized reports prepared by NCRSA.

Mason, in his talk on salesmanship, stressed that there are 5 million men selling in the United States. "Very few of them, however, believe and act as though they think of selling as a profession," he offered.

Reading the dictionary's definition of a profession, Mason attempted to show how selling meets the definition. He listed four areas of knowledge "which are indispensable to good selling — knowledge of product, presentation, buyer, and self."

Asked how to overcome sales objections, Mason divided them into two categories — sincere and insincere.

"The sincere objection you attempt to overcome by understanding his reasoning, whether it be money or timing, or whatever.

"The insincere objection is really mere sales resistance and you eliminate it by asking **why** or more pointed questions. You ignore an insincere objection and go on with the story. (You never ignore a sincere objection). Or you can casually laugh off the sales resistance; tease the customer, if you will."

Third day script was devoted to several business topics—financing, credit, the approach to use for voluntaries and co-ops, a review of sales techniques, details of a new incentive program.

"Tyler Operation Breakthrough"—a professionally produced recording of President Tyler's voice guiding the prospect through a picture plant tour—made a big hit with the audience. The records and booklets are available to Tyler distributors and agents.

J. Alvarez, president of Tyler International, C.A., summarized the overseas prospect for commercial refrigeration. He showed slides of supermarkets now installed in Germany, France, Holland, and England.

"For those of us in Tyler International, it is only a short step from Europe to Africa," Alvarez proposed. "After the unrest due to new found freedom has leveled off to responsible governmental stability, as it must, Africa will move ahead and no longer be the dark continent."

According to Alvarez, of 25,000 retail food outlets in France, 1,100 of them are self-service. In England, he estimated, more than 100 new self-serve stores are going in per month, many of them with refrigerated fixtures.

Scotsman Announces Ice Machine Models, Stepped-Up Advertising, Marketing Program

ALBERT LEA, Minn. — Enthusiastic dealer reaction to a broadening of the "Scotsman" ice machine line has been reported here by R. J. Lickteig, vice president and general sales manager, Queen Products Div. of King-Seeley Thermos Co.

Scotsman has announced two new cubers, a new standard flaker, a new gasoline-powered flaker, two bins, and two new ice merchandisers.

Lickteig's summary of field reaction was based on a region-by-region check of Scotsman distributors, for whom the expanded product program was detailed at the company's three-day national sales convention at Chicago's Sheraton Towers hotel in January. Scotsman distributors have since been holding dealer meetings throughout the country.

Highlights of these meetings included announcement of a stepped-up advertising and marketing program featuring factory advertising expenditures "far in excess of those for any previous year."

The two new cubers—SC-300 (air cooled) and SC-300W (water cooled) both have daily capacities of 300 lbs of ice, it was pointed out. Both feature the "Scot-O-Matic" ice-making mechanism developed by Scotsman. Models in the "300" series take only 8 sq ft of floor space when used with the SB-400 Scotsman bin, and only 10.2 sq ft with the new BH-650 bin.

The BH-650 is a 650-lb-capacity horizontal bin that may be used not only with any model of the new SC-300, but also with the SC-500E Scotsman cuber. The BH-650's two sliding doors make ice readily accessible. It is available in either grey hammerloid baked enamel or stainless steel, matching the finishes available in the cubers.

Model SF-5F, the new Scotsman Super Flaker, produces up to 2,000 lbs of crushed ice per day. Like the new cubers, the SF-5F is available in either grey hammerloid or stainless steel, and with either water-cooled or air-cooled compressor. The SB-1000 bin has been redesigned for use with the SF-5F.

The new Scotsman gasoline-powered SF-4G, scheduled for late May and June shipment, utilizes a 4-hp gas operated compressor and can be adapted to burn either gasoline or LP gas. Primarily engineered for use in foreign markets or where standard electrical power is a problem, the SF-4G has a daily capacity of 1,050 lbs of flaked ice, the company said.

To round out the line of units presently being offered to those in the "ice sales" business, the IM 6 and IM 33 ice merchandisers have been added. Model IM 6 is a 6-cu ft, chest-type freezer which will hold 15 8-lb bags of ice for self-service dispensing.

The Scotsman IM 33 is a 33-cu ft chest-type ice merchandiser with a capacity of 85 8-lb bags of ice. Both units are equipped with casters.

With the addition of the new units, Scotsman's ice machine lines now include nearly 70 basic models and variations.

The advertising and promotional program supporting Scotsman distributors' and dealers' selling efforts for 1961 "entail the widest diversification and greatest factory-dollar outlay in Scotsman history," it was stated.

Business paper advertising has been significantly increased, with emphasis, according to Lickteig, on hard-hitting testimonials from Scotsman users in a wide variety of applications.

Also announced was the recent addition of six new Scotsman regional sales managers. Operating exclusively with Scotsman distributors, they are, with their principal areas of activity: Howard St. Aubin, Tennessee; E. F. Kozel, Minneapolis; L. D. Holman, Pittsburgh; J. W. Ward, Atlanta; Wm. D. Worthy, Florida; and R. W. Addington, Dallas.

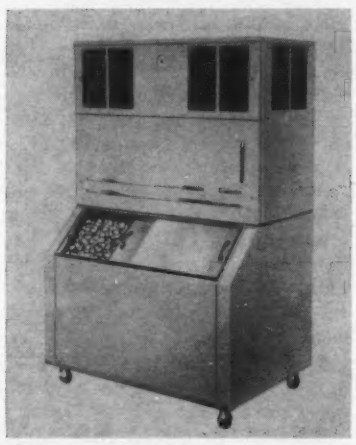
Nearly 100% distributor attendance, including representatives from Canada and Mexico, was recorded at the three-day Chicago meeting.

Sharing the platform with Lickteig were: A. Neil Gustine, president of King-Seeley Thermos Co., Queen Products' parent corporation; R. C. Trow, Queen Products vice president and general manager; M. H. Mathis, Queen Products national service manager; and Truman Stone, advertising manager of King-Seeley Thermos.

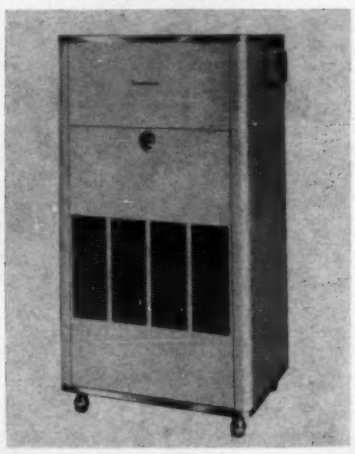
Featured also was Earl E. Allen, Flint Refrigeration, Birmingham, Ala., who presented the report of the 1960 Scotsman Distributor Advisory Council. Council members elected by the distributor organization for 1961 are:

Ben Colgin, Texas Ice Machine Co., Dallas; Chet Borden, A. E. Borden Co., Boston; D. B. Thomas, Shipley Co. of Canada, Ltd., Toronto; Earl Yockey, American Refrigeration, Inc., Columbus, Ohio; Grant Adams, A-1 Refrigeration Service, San Jose; Tex Snyman, Scotsman, Inc., Tampa; Fraser McGuire, McGuire Sales Co., Lubbock; Chet Valenta, Scotsman Refrigeration, Inc., Los Angeles; C. E. Long, Noland Co., Inc., Columbia, S. C.; R. C. Reese, Reese & Long Refrigeration Products, New York City; and Earl Moore, Moore Equipment Co., Dothan, Ala.

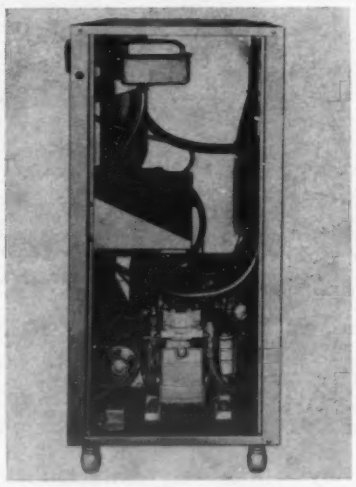
Trow and Lickteig are factory representatives on the council.



NEW MODEL SC-300 Scotsman Super Cuber mounted on BH-400 Bin makes combination for moderate ice users. Combination will manufacture up to 300 lbs of ice cubes per day and store up to 400 lbs of ice.



NEW FOR HOTELS, motels, restaurants, hospitals . . . wherever a volume ice supply must be available is the Scotsman 2,000 lb-per-day Super Flaker model SF-5F.

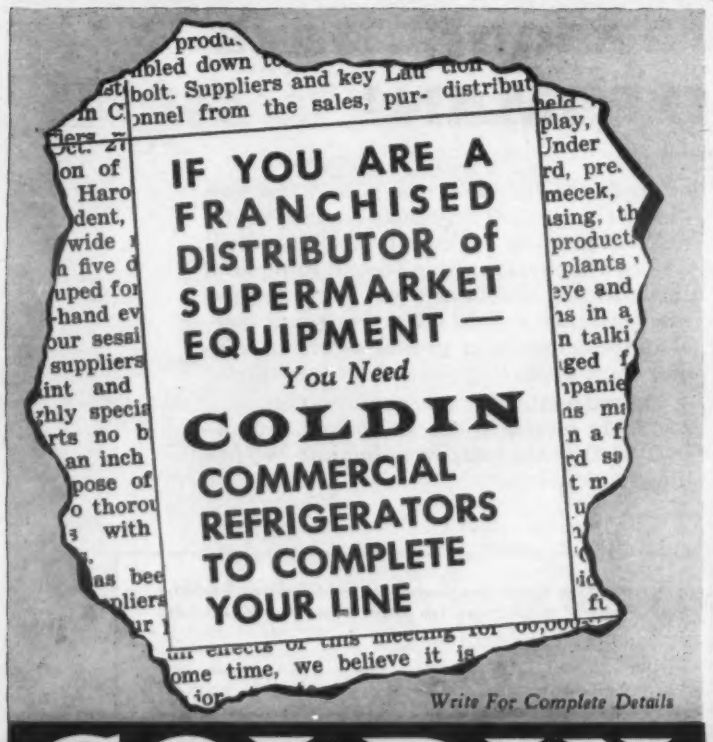


AN INSIDE LOOK—with service panel removed all integral parts of the new gas operated Scotsman model SF-4G are readily accessible. All components are standard with the Scotsman SF-3 series of ice machines.

Rotary Booster Reduces Maintenance

YORK, Pa.—A new technical article, offered by Freezing Equipment Sales, Inc., 1405 N. Duke St., York, Pa., describes how Penn Dairies minimized maintenance of a new field-distribution ice cream storage box by designing an automatic refrigeration system.

The two-page article explains how and why Penn Dairies adapted a two-stage rotary booster package and air-cooled condensers to the refrigeration system. How the entire refrigeration system was installed in the 15,000-cu ft storage room, at Gettysburg, Pa., is also covered.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COMMERCIAL REFRIGERATORS TO COMPLETE YOUR LINE
Write For Complete Details
COLDIN
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THE BOSSMAN CONTROL For NEW PROFIT sell this patented comm'l refrigeration Control. Owner dials safe lower temperatures, higher humidity, yet has frost-free coils. Replaces timers, pressure control guessing. Write for Bulletin "B". BOSSMAN, 613 W. Washington, Chicago 6, Ill.

Scatena Tells NCRSA

Why Commercial Refrigeration Distributor Should Diversify, And How He Does It (1)

NEW ORLEANS—Why is it sound for a display case refrigeration distributor to sell ice machines, air conditioning, and engineered machinery installations?

James A Scatena of Scatena-York Co., San Francisco, answered not only this question, but told how he does it and his concept of his responsibility to the manufacturer.

Speaking at the 14th annual convention of the National Commercial Refrigerator Sales Association here, Scatena declared that the "why" has to do with "a very important part of our business known as *labor,* its cost per hour, and the efficient allocation of this scarce and expensive commodity especially when the word 'skilled' is added to it."

He continued:

"I figure that if it is costing us in California as high as $8.05 for every labor hour that we have to sell, then we necessarily have to consider how to best use these scarce hours that we have available.

"This figure of $8.05 per hour is a result of a recent survey by one of our contractor affiliates and the figure, of course, includes wages, overhead, fringe benefits, lost hours, etc.

"Let us consider a firm doing a $2 million annual business volume. Then consider that $1 million of this volume represents the food market sales and the other $1 million represents sales of the three classifications.

"The question I have asked myself is, should we try to sell the entire $2 million in food market volume, or should we try to sell the second $1 million in diversified products consisting of air conditioning, ice service equipment, and engineered machinery equipment?

Fewer Man Hours Needed for Ice Maker

"We answer ourselves by making the following analysis.

"It takes about 700 man hours to install a $50,000 market sale, but we can install eight 3-ton 'Flakice' machines to eight different accounts involving the same $50,000 volume with 400 man hours.

"More important is that the average markup on a $50,000 market sales is about 1.25, whereas the average markup on eight Flakice machines is about 1.40, or better.

"Is it not, therefore, wise to use this scarce labor where it brings the best results?

"Then again, if financing is involved, the question you must ask yourself if whether it is better to finance one sale for $50,000 with, say 20% down payment, where the labor consumed is about 12% to 15% of the total sale, or would it be better to finance eight Flakice machine sales where the labor is 8% to 10%, and where probably a number of the machines are sold for cash with the rest of them on a divided risk basis to different customers?

"I think that the answer is rather obvious. You consume less man hours, have less risk, and more profit on the Flakice machine sales.

"Aside from the benefit of being able to use valuable man hours of labor to install equipment that generally takes a larger markup and less days to install, there are other benefits.

"For example, we did not realize when we sold the large hotels in San Francisco ice cube machines, that the engineer of the hotel might just call us if the barber shop in the hotel needed air conditioning.

"A large hotel may be likened to a small town that can only support one refrigeration dealer and that dealer must be able to supply most of the refrigeration products required for that small town.

"The same sales engineer for our firm who is successful in selling the ice machines can certainly be trained to sell the hotel these other products.

"Oddly enough he can generally sell all these items with less competition and a little better markup by reason that he already is 'established' with the hotel.

"His sales help to fill in the spaces of our sales register when our food market sales become spaced further apart than we would like them.

"Every department in our company down the line benefits by these extra sales, including the service and erection department.

"Moving on to *how* we believe the non-food market sales should be made, we run into a problem. There is no question but that the best results are obtained through specialty type of selling, definitely departmentalized.

"We have learned for example, that the ice service department in our company is such a specialty department that we cannot even separate the wholesale distribution from the retail sales.

"We find that the restaurant and hotel supply firms sell certain types of accounts such as hotels, motels, and some restaurants . . . particularly the new restaurants . . . and that ice machines have to be sold through these firms at the wholesale level.

"On the other hand, these supply firms have no objection to our company selling ice machines at retail to existing hotels who are changing over to making their own ice, or to the food processors who require flake ice, or to any other account that they do not sell a packaged deal to.

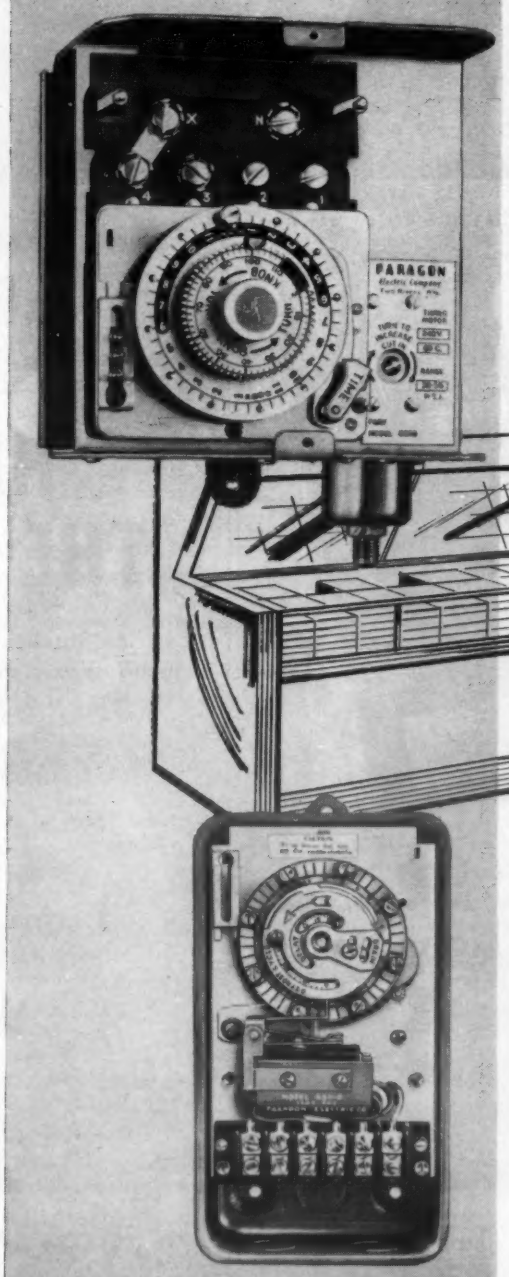
"Parenthetically, I should add that a price differential must be maintained between the retail account and the hotel and restaurant supply account so that we will not be guilty of direct selling at the same price.

"So, in the ideal situation an ice service sales department has a supervisor at the head and salesmen under him selling the machines at both wholesale and retail levels.

(To Be Continued)

Far more Accuracy * Versatility * Dependability

in commercial defrosting with **PARAGON's...**



8200 SERIES D-FROST-O-MATIC—

designed for use as time-initiated, pressure-terminated defrost control

Ideal for electric heat and compressor shutdown defrosting. Defrosting periods automatically varied . . . frequency from one to six cycles per day.

A precision-built time control and pressure bellows, the 8200 Series is connected to the suction side of the refrigeration system by a copper tube. Length of defrost is not dependent upon a time cycle, but is terminated when the coils are free from frost. *No unnecessary downtime!*

Exclusive 100% adjustable fail safe. Will transfer switch if equipment is not brought back into a refrigeration cycle by an increase in pressure within a specified period of time. Pressure cut-in is adjustable too.

Powered by a heavy-duty, self-starting, 4-watt, industrial-type motor. For complete details on the 8200 Series write for BULLETIN 5949.

600 SERIES TIME DEFROST CONTROL—

designed for defrosting systems which require a timed fan delay or drain period at end of cycle

With the system-tailored 600 Series you can easily change the frequency of defrost and the length of defrost cycle to meet your load requirements. The time control is perfect for defrost systems having water spray, hot gas fan delay, or electric heat fan delay.

It has three adjustable settings — a pre-delay or pump-down cycle, a defrost cycle and a drain or fan delay cycle. Two dials: *bottom dial* controls frequency of defrost according to the time of day; *top dial* controls duration of defrost cycle by the three adjustable settings.

Frequency of defrosting can be set for every 3, 6, 12 or 24 hours.

The unit is powered by a 4-watt, heavy-duty, industrial-type motor. For complete details on the 600 Series write for BULLETIN 5945.

PARAGON
ELECTRIC COMPANY
1687 Twelfth St. • Two Rivers, Wisconsin
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In Air Conditioning, Heating, or Refrigeration, go to the only complete, up-to-date reference source . . . the 1961 Directory. Year after year the Directory has been the buying guide of the industry. Get your copy today.

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Company

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At Chicago Exposition

THERMOELECTRICALLY COOLED BAFFLE attracts this visitor's attention. Using conveniently placed "Frigistor"—thermoelements manufactured by the Needco Group of Companies—the baffle increases the efficiency of high-vacuum equipment without the use of auxuiliary refrigeration compressors. Also on display in the Needco booth were a small thermoelectric refrigerator and an experimental kit designed to familiarize neophytes with thermoelectric principles and phenomena.

MATCHING CONDENSING UNIT section and plenum section mark this Johnson Furnace Co. system for residential or light commercial applications. A 3-hp. B-W condensing unit supplies the cooling effect.

MOTORIZED damper introduced at the show by Penn Controls is discussed by R. E. Montgomery of Schnacke, Inc., D. L. Hanson of Penn, and Glen Gill, also of Schnacke.

U-LOK FILTER with five filtering faces produced graphic evidence of how dirty the air in the exposition hall really was, points out Dave Harrison, marketing manager for Union Carbide Development Co., a division of Union Carbide Corp.

HERE ARE THE WINNERS!

In the Mueller Brass Co. Masterline Golf Tournament prize drawing at the 15th International Heating and Air-Conditioning Exposition . . .

1st CHARLES RUCKA
Owner, Rucka Refrigeration Service
2700 South St. Louis Avenue, Chicago, Illinois
COMPLETE SET OF "CITATION" PROFESSIONAL GOLF IRONS

2nd JOHN M. BLAIR
Sales Manager, Williams & Company
901 Pennsylvania Avenue, Pittsburgh, Pennsylvania
SET OF "CITATION" PROFESSIONAL QUALITY MATCHED WOODS

3rd DAN M. RADER
Vice Pres. & General Manager, Alley & Rader Co., Inc.
225 Cobb Avenue, Burlington, North Carolina
ACHUSNET "BULLS-EYE" PUTTER AND McGREGOR WEDGE

Our thanks to all who stopped at our booth . . .

MUELLER BRASS CO.
PORT HURON 13, MICH.

DETAILS ABOUT COLEMAN CO.'s new 3-ton heat pump are eagerly grasped by Charles A. Johnson (l.) who traveled 10,000 miles from Cape Town, Union of South Africa, to visit the show. His namesake, Ed Johnson, national service manager for Coleman, obliges with information.

FEATURES OF NEW compact Dunham-Bush air handling unit are pointed out for Robert Mooney (l) of Budlock Refrigeration Supply Co., Evansville, Ind., by Al. A. Lincoln, Philadelphia district sales manager.

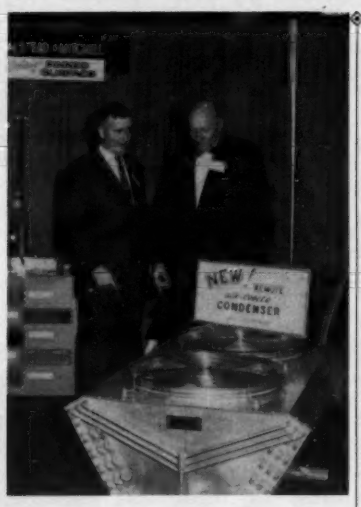
150-TON MULTI-STAGE, propeller fan cooling tower was introduced by Baltimore Aircoil Co., Inc. William E. Kahlert (l.), BAC vice president for sales, and Chick Overend, assistant sales manager, show off the quiet-operating model TPM to William P. Tennity, president of the Western Air Conditioning Industries Association.

HIGH-STYLED, COMPACT series 700 Armstrong Furnace Co. models measure only 12 in. wide in the 60,000 and 80,000 Btuh models, and can also be adapted for year-round air conditioning. Mr. and Mrs. Larry Ruble of Central Furnace & Supply Co., Naperville, Ind., give an idea of the compactness as they look over a model.

AIR-COOLED CONDENSER of 100 tons' capacity that stands only 76 in. high, including foundation piers was star attraction at the Buffalo Forge Co. booth. C. M. Stevens and J. B. Johnson of Buffalo Forge pose with the #400 air-cooled condenser.

BROAD line of new compressor controllers was featured by R.B.M. Div. of Essex Wire as J. McClain (l.) and D. Kampenga (r.) of the company explain to Paul H. Hopper of W. H. Kiefaber Co., Dayton.

COPELAND's new 6-cylinder accessible hermetic motor compressor is shown by Frank Gleason (l.), Copeland Refrigeration Corp. president, to C. M. Brown, a director of Addison Products Co.



ALL-ALUMINUM DOUBLE-FAN air-cooled condenser for remote installations was among items featured by Halstead & Mitchell.

SPORLAN has increased the size range of its "See-All" liquid indicators to 1⅛ in., Don Rentschler explains to Ned Mason (l.), Columbus, Ohio wholesaler, and Joe Corbin (r.), manufacturer's representative.

FORCED AIR ELECTRIC furnace with air conditioning was highlight of the Southwest Mfg. Co. booth in the opinion of Milo Chavez (l.), vice president of sales, and Harry P. Schultz, product manager in the heating division.

WE EXPAND YOUR DOLLARS MIGHTILY

Sure, everybody likes to make a buck go farther. At the Harry Alter Co. we think our prices are *always low.* And everybody big or small, city or country, pays the same fair price. Our transportation allowance saves you even more money. (And if you pick up at one of our 6 counters, you still get this allowance.)

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REFRIGERATION · AIR CONDITIONING · ELECTRIC MOTORS

SUPPLIES and PARTS

SAVE MONEY, time and effort by ordering from our new *Dependabook*, the most complete catalog of all. 248 pages. Over 10,000 items carried in stock. *Wholesale only.* Your orders filled really fast by mail, or they can be picked up at one of our six big warehouses.

Write on your letterhead for the 1960-61 DEPENDABOOK...
Also our monthly Flyer of surplus and close-out Bargains.

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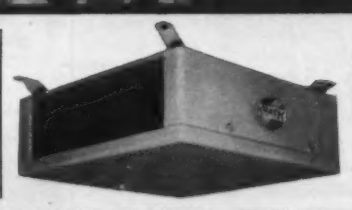
Chicago 16, Ill.	New York 13, N.Y.	Dallas 7, Texas	Atlanta 10, Ga.

FREE PARKING AND FAST COUNTER SERVICE AT THESE 4 BIG WAREHOUSES

Wholesaler: Pacific Metals, Ltd. *Contractor,* Frank Samuels Distributing Co.

Dressed beef being conveyed from slaughter room to chill room.

At right, one of nine KRACK F1700ST ceiling units hold room at constant temperature, humidity level.



"We demanded the Best... and got it!"

21 KRACK units at Harbour Meat Co. hold temperatures from -15° to +52°

... according to Mr. Glenn Harbour, manager and partner, their meat packing plant in Tucson, Arizona, was designed and built from the ground up to assure retaining of meat quality through proper processing, cutting and aging. "Quality is extremely important—we raise our own prime beef and want to make sure it gets to customers in top condition. Since refrigeration can mean the difference between good and bad meat, we had to have units that would hold temperatures dependably, at reasonable cost. We found that KRACK standard production units filled our specifications to the letter."

Equipment Installed

1 Ceiling mounted unit cooler — FA750F	1 5-ton evaporative condenser — 1AE5
1 Heavy duty water defrost unit cooler — ZE2000F	1 40-ton evaporative condenser with 9 circuits — 4AE40
9 High efficiency unit coolers — F1700ST	2 Air conditioning units for meat cutting rooms — CM400AC
6 Heavy duty product coolers — MA2100F	

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KRACK REFRIGERATION APPLIANCES, INC.

Manufacturers of Freon or Ammonia, Recirculated, Flooded or Direct Expansion Heat Transfer Equipment

REFRIGERATION APPLIANCES, Inc.
901 West Lake St., Chicago 7, Illinois

FREE! new catalog of complete line

Hermetic Trends & Service Requirements (3)

*By John J. Floreth, Vice President and Director of Services, York Div., Borg-Warner Corp.**

SUMMARIZING the history and impact of hermetic compressors on the air conditioning and refrigeration industry, this series of articles goes on to discuss modern concepts of hermetic servicing.

Service responsibility starts at the manufacturing level, where it is necessary to produce and deliver a tightly sealed and properly charged hermetic system entirely free from dirt, moisture, and other contaminants.

This requirement begins with the motor-compressor unit which must be completely dehydrated by passing hot, dry air through the windings, and then baking at high vacuum until the windings reach a temperature of approximately 300°. An inert carrier, such as nitrogen, can be used to conduct heat from the shell to the motor, and successive sweeps by this inert gas are sometimes used during baking.

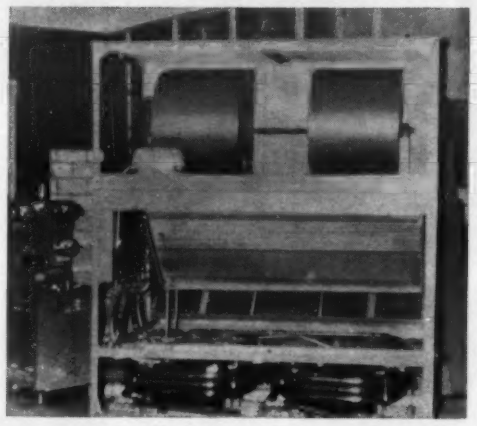

FIGURE 4

All coils used in hermetic circuits must also be dehydrated by sweeping with a dry inert gas, preferably while the coil is heated from the outside by radiant heat. Condenser coils are dehydrated by using a hot hydraulic fluid, followed by sweeping with dry nitrogen to scavenge the volatile solvents.

When assembling these thoroughly dehydrated components, brazing is done with a dry inert gas within the lines, to prevent oxidation of the inside of the tubing joint and also prevent infiltration of moisture laden atmospheric air during assembling.

Before charging the complete system with refrigerant and oil our manufacturing processes again stipulate complete dehydration of the assembled system by pulling a deep vacuum, to approximately 50 microns absolute pressure. Special care is also taken to assure charging with only dry refrigerant and moisture-free oil.

The hermetic system responsibility then passes into the contractors' hands where any discussion of field responsibility must start with a good quality installation, thus minimizing future service problems.

Although the following comments will relate particularly to the installation and servicing aspects of welded hermetic systems in unitary apparatus, the same general principles, applied with judgment, will be involved in the installation and servicing of the larger equipment and systems, even up to 1,500 hp.

Field installation and servicing problems can generally be minimized by the use of factory built, self-contained systems wherever these type units are applicable.

Fig. 4 is a photograph showing the interior of a typical unit of this type capable of delivering 25 tons of air conditioning duty. Similar units are available ranging from three to 30 tons' capacity. The system components in these units have been individually proven by both laboratory and field testing, and a compatible combination of these components has been designed to produce the best results.

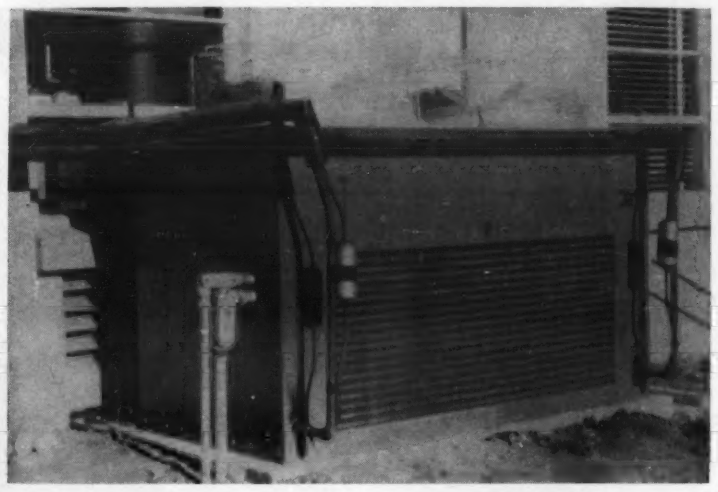

FIGURE 5

Factory assembly permits careful control of all assembly techniques and procedures to provide a well-balanced, clean, dry, tight system requiring minimum future service.

Fig. 5 shows the field application of a 10-ton remote condensing section that has been piped to its factory matched evaporator-fan section located within the structure.

It is apparent from the photograph that field conditions do not always permit ideal assembly techniques but must still be carefully controlled to approach the same optimum conditions of factory assembly. All our efforts must be directed to defeating the constant enemies of any hermetic system, whether factory or field assembled, namely, dirt and foreign material; moisture and the resultant formation of acid.

Dirt may take the form of copper chips, filings, or sandings from improper cleaning of tubing after cutting. It may also take the form of copper oxides from the heat of brazing without the use of an inert gas in the piping. This copper oxide can then flake off to combine with other forms of dust or dirt which accidentally get into the system during assembly because of inadequate cleaning, haste, or carelessness, and are sealed within.

(To Be Continued)

*An edited version of a talk before Refrigeration & Air Conditioning Contractors Association.

Water Desalting Device

NEW YORK CITY—General Electric Co. has announced a new water desalting device which heats sea water, then precipitates out most of the salt content around a rotating "wiper" blade.

G-E claims the device requires only about one-fourth as much energy as various other distilling, chemical, and freezing processes.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

A
RELAY
TESTER
At Last!

The first Tester for Potential Type Refrigeration Relays used on most Air Conditioners and Remote Refrigeration Units of the single phase variety, 115, 208 or 230 volts A.C. A MUST FOR ALL SERVICEMEN! Simple to operate, full instructions printed on front panel. Easy to carry (weighs less than 3 lbs.) Saves time, eliminates guesswork. Guaranteed for one year. $37.95 Postpaid. Write for free pamphlet.

FRIGID EQUIPMENT CO.
Dept. A.H. & R.N., 1340 St. Stephens Road
Mobile, Alabama

A.O. Smith has the horses!

800 to 1 hp favorites for quiet operation, low maintenance and long-life service . . .

From the case of the A. O. Smith Motor Man — a complete stable of integrals that include single-phase models (1-5 hp) or polyphase (1-800 hp). Also a team of fractional-hp motors. All are sure bets to give top performance over the long, long haul.

And there's an A. O. Smith Motor Man near you — chomping at the bit to give you 24-hour action on all parts and service orders.

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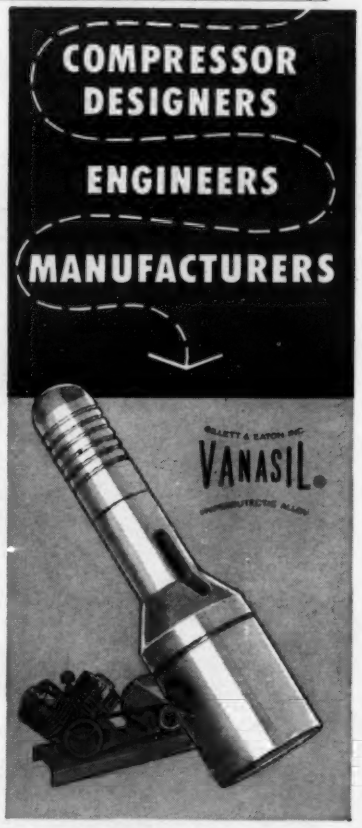


KNOW YOUR
PISTONS

Did you know that Gillett & Eaton Vanasil pistons absorb oil to run with less friction? In addition to this hypereutectic aluminum alloy, G & E makes other aluminum, hi-tensile iron and bi-metal pistons in all sizes and shapes. Write for information on the performance you can expect from each type—specify your compressor use.

GILLETT & EATON, Inc.
861 Doughty Street, Lake City, Minn.
Sold in Canada by
Gould National Batteries of Canada, Ltd.
Fort Erie, Ontario
Piston and casting specialists
Established 1868

Accuse Builder--

(Continued from Page 1, Col. 3)

Victor Ventimiglia was charged with violating the Builders Trust Fund Act by not paying the Defever Bros. Plumbing & Heating Co., East Detroit.

According to Detective James Gardner of the Prosecutor's Detail, Albert Defever, owner of the subcontracting firm, complained that he wasn't paid for work finished Jan. 14, 1960.

The builder apparently signed Defever's name on a certificate of payment to the mortgage company, Gardner said. He added that he has nine similar complaints totaling about $6,500.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

More Products Exhibited at Heating and Air Conditioning Show

HOLDING DRI-PAK Series 2000 filter cartridge for high efficiency dry type filtration is Tom Chambers, field sales administrative assistant at American Air Filter Co.

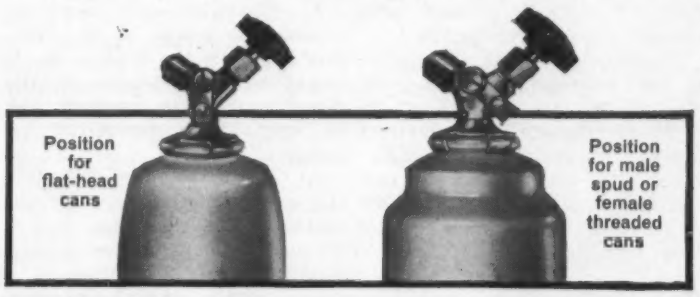
NEW ZONING CONTROLS for hydronic heating, introduced by White-Rodgers Co., are discussed by Ken Richert (l.) of White-Rodgers' Chicago office and salesman W. A. Schmotzer.

NATURAL GAS unit for driving air conditioning compressors offered by Caterpillar Tractor Co. is explained by T. J. Davison (l.), development engineer, with the help of the "Mechanical Man," Rene Paul Costaz, to W. S. Davis of the Iowa Power & Light Co. of Des Moines.

When you tap a can... stop fumbling with loose parts

Use a new Imperial Universal Tap-A-Can Valve

No fumbling . . . no chance of misplacing rings with this new valve. Simply adjust guide and ring holder, tighten valve on can and attach charging line. Dispense any part of the refrigerant and save the rest. When can is empty, remove valve and use again. Fits *all* refrigerant cans (Can-O-Gas, Charge-A-Can and others). Ask for Imperial No. 331-C Universal Tap-A-Can Dispensing Valve.



IMPERIAL EASTMAN

Imperial-Eastman Corporation General Offices: 6300 West Howard Street, Chicago 48, Illinois

ARW National Convention In Chicago--

(Continued from Page 1, Col. 3)

ARW's legal counsel, who stated that through contact with the Air-Conditioning & Refrigeration Institute, a planned program has been instituted whereby the problem as seen by ARW has been presented to the ARI which in turn is advising its membership of the problem.

"It is the earnest desire on the part of ARW to cooperate fully with ARI on a voluntary program of education to all elements of the industry in solving this problem within the industry," said the report.

ARW Members Urged To Act Through Association

Sommer called upon all ARW members to recognize the seriousness of this matter of sale by manufacturers of parts intended for use on end products, but warned the members against using the program set forth by ARW as a sledgehammer in dealings with individual manufacturer suppliers.

"We recognize that there are a number of cases where direct action could be taken," said the legal counsel, "but your board of directors as well as myself believe the best way to approach the problem is through the two associations. If this does not alleviate the condition, then other steps must be taken."

Proposed revisions to ARW's constitution, submitted to the membership by Paul Cato, chairman of the Constitution Committee, included a new outline of objectives, a revised method of electing new members, and a change on provisions concerning Regions and regional membership. Those in attendance authorized the directors to submit these revisions to the entire membership for a vote.

Advertising Program

The advertising program presented was based on the theme "Putting You in ARW's New Look." This program will consist of 13 letters written to all manufacturer suppliers calling attention to the many services offered by ARW members to the trade groups. These letters will be personalized and will identify the broad scope of ARW's coverage in all marketing areas. In addition, a concentrated program will be directed to non-affiliated wholesalers soliciting their membership in ARW.

Reaction of ARW's trade relations meetings at the national level with a similar committee of Refrigeration & Air Conditioning Contractors Association (RACCA National) was reported by Irving Fajans, chairman of the Trade Relations Committee.

"We have come a long way in the past number of years in realizing that many of the industry's ills can only be solved through mutual effort by manufacturers, wholesalers, and contractors," Fajans said.

"In our committee work with RACCA, a planned agenda is set before we get together, and all discussions are limited to that agenda. It means a concentrated effort on both parties' part to come to conclusions that will aid us both. These committee meetings will be reported to all members, but only those instances of mutual agreement on certain issues will be fully reported to the industry."

Four new wholesaler members and one new associate member have been elected since the membership committee's last report, stated E. S. Diggle. New wholesaler members include Aireco Supply Inc., Washington, D. C.; B and W Supply Co., Portland, Ore.; Davidson Supply Co., San Francisco; Refrigeration Suppliers, El Paso, Texas. New associate member is Lester Laboratories Inc., Atlanta, Ga.

ARI now represents 491 wholesale locations throughout the world, Diggle stated.

In his acceptance speech, incoming President Sorensen said that "the course set under my predecessor, Bill Miessemer, is

(Continued on next page)

ENGINEERED BY EDWARDS

AIRVEC

The completely silent Air Cooled Condenser

Never needs cleaning

WRITE FOR BULLETIN AV-4

WRITE FOR BULLETIN TT-633

WATER COOLED **COAXIAL CONDENSERS**

Domestic and sea water models

Reduce costs 40% . . . Reduce condenser water 35% . . . Reduce refrigerant charge . . . Stabilize capillary performance . . . Compact shapes.

MOTORIZED VALVES

For chilled water cooling systems and for heating systems . . . 100% positive shut-off . . . Compact . . . Low cost . . . Low Voltage . . . No current draw when open.

WRITE FOR BULLETIN MV-1

EDWARDS ENGINEERING CORP.

938-20 Alexander Ave., Pompton Plains, N. J.

TEmple 5-2808

"One of the nation's largest manufacturers of Residential and Commercial Boilers, Baseboard and Steel-Fin Radiation, Motorized Valves, Air and Water-Cooled Refrigerant Condensers."

ARW--

(Continued from preceding page)
one that we must continue. We call it the 'New Look in ARW.'

"It is not truly new, but a reaffirming of the things that all of us agreed to 25 years ago . . . a wholesaler has a rightful place in marketing of air conditioning and refrigeration products and therefore expects rightful recognition from the manufacturers and the trade who are selling, installing, and maintaining said products.

"Ten years ago, a person could have said to you 'this is a crossroads for wholesalers.' Today, it is a crossroads and I'm sure 10 years from now, it still will be a crossroad. A battle will always be with us, and that is the reason we must stand together to prove to all, we are the best distribution. And to prove it, we must be the best."

Alter on What ARW Can't Do for Members . . .

Alter's talk at the 25th Anniversary Dinner presented his own viewpoints, based on some 40 years in the equipment wholesaling field, of what an association can and cannot do for its members.

"Your association cannot provide a shelter for those of us in this industry who are dishonest, who are incompetent, shiftless, or downright stupid. Nor is it a haven for a member who is hopelessly under-capitalized. ARW can do nothing to guarantee us an automatic profit nor an effortless success.

"Neither can it eliminate competition, nor stop mal-practices, nor correct unethical conduct, nor prevent price and profit cutting indulged in by some among its membership; nor can it attempt to prevent a newcomer from opening a store and entering this already highly competitive field. Your association cannot attempt to coerce nor threaten with the bare implication of a boycott, any manufacturer whose policies and practices appear objectionable."

. . . and What It Can Do

The main things that an association can do for its members, Alter described as—

Becoming better acquainted with competitors, and working out a fair basis of competition. Having group representation in relations with other segments of the industry and government.

Having the means to use the "Holler Technique" about policies that seem wrong, and making the "hollering" effective. Making studies and assembling data that reveal the fallacies in price cutting, and which enable the individual wholesaler to operate his business more efficiently and profitably. In this regard Alter strongly urged studies by ARW which would shed some light on problems and policies of the individual firm.

(Because Alter's talk covered many points of interest to all segments of the business, the editors plan to publish a more comeplete report of it in a future issue.)

OFFICERS AND DIRECTORS OF ARW for the coming year sit for their photograph. (Officers will be so designated, others are directors.) Rear row (l. to r.) Paul Cato, Tersco, Ft. Worth; Harry Dawson, Acme Refrigeration Supplies, Inc., New Orleans; Frank Pond, Refrigeration & Industrial Supply Co., Minneapolis; Tom Jordan, Jordan Supply, Buffalo; Jack Tupper, Thermal Supply Co., Seattle; Thom Muir, executive vice president; John P. Sheperdson, Standard Supply, Inc., Worcester, Mass.; I. J. Fajans, Aetna Supply Co., New York City.

Front row (l. to r.) Charles Koopman (retiring director), Supply Distributors Corp., Boston; Paul Bodwell (secretary), The Bodwell Co., Harrisburg, Pa.; W. C. Miessemer (immediate past president), Arizona Refrigeration Supplies, Phoenix, Ariz.; E. P. Sorensen (president), Airo Supply Co., Chicago; E. H. Davey (vice president), Davey Sales Co., Akron, Ohio; E. S. Diggle (treasurer), Henry V. Dick Co., Columbia, S. C.

ROARING '20's PARTY that marked part of celebration of its 25th anniversary has Chicago host wholesalers and headquarters staff in proper attire for the event. Seated is Gordon Carlstrand, Fred C. Kramer Co. Standing (l. to r.) Betty Carlstrand, James Alter, Harry Alter Co. (complete with "heater" and violin case for carrying "Tommy gun"); Joan Alter, Kaye Crist, headquarters staff; E. Peter Sorensen, Airo Supply Co.; Thom Muir, ARW executive secretary; Mary Muir.

Advise Wary Approach to Industrial Sales; 'Automated' Bookkeeping Use Increasing

For three continuous hours, three separate panels and the attending ARW members stated, opined, rebutted, and declared their views on subjects pertinent to the operation of their business. Enthusiasm was high as the assembly took on 1) advertising, 2) automated accounting, and 3) the problems of selling to industrial accounts during ARW's annual meeting.

Industrial Selling

There was a flurry of excitement when Thom Muir, ARW executive vice president, announced that not one of eight members who had been invited to talk on the industrial accounts problem would agree to sit on the panel; several members volunteered from the audience to sit in, and it seemed that a lively session might occur.

As it turned out, however, all the speakers and the audience were in such general agreement that the session merely resulted in restating the consensus: that the wholesalers feel it is just to sell to those industrial accounts which have their own installation and maintenance personnel, since these accounts are, in effect, doing exactly the contracting work which is done by the wholesalers' contractor customers.

Qualifying an Industrial Account

One wholesaler did add that he felt there should be a dual qualification before an account deserved direct selling. "First, there must be a recurring need for equipment and supplies; it must be obvious that the account is not a one-shot customer. Second, the account must have the personnel who can handle the work."

In the minds of some, there is the unsettled question of how the wholesaler can determine whether an industrial account has qualified refrigeration and air conditioning personnel. At least one member described an instance where the industrial purchasing agent deliberately misled him, and the wholesaler was then "racked" by RACCA —the Refrigeration & Air Conditioning Contractors Association.

(A meeting between RACCA and ARW committees on the general subject took place on the day following the ARW session.)

E. W. Horwood, Thermal Controls, Ltd., Montreal, explained that the Canadian Refrigeration & Air Conditioning Association is made up of manufacturers, wholesalers, and "supporting suppliers." (Supporting suppliers are those who produce such things as copper tube which is also sold to other industries).

"When an individual contractor has a complaint against an individual wholesaler, he can refer it to his own contractor's group which will in turn bring it up before CRACA's grievance committee. This keeps the problem from becoming a personal one and emphasizes that such problems are to be solved on industry principles," Harwood offered.

One or two ARW members contended that there could probably be "a bit of skirt cleaning on the part of both the contractors and the wholesalers."

This was seconded with the statement that "We must learn to resist the temptation of 'borderline cases,' instances where we aren't sure of the qualification of the so-called industrial account. Don't let the counterman make these decisions for you."

Another thought: "When a good contracting customer asks you to sell someone direct, bill the contractor while sending the material care/of the ultimate user; this will protect you against misunderstandings."

A related problem, all agreed, is the increasing tendency of manufacturers to sell direct to large contractors and industrial users, by-passing the wholesaler. "In cases like this, our contractor-customers are guilty of profiting by they very thing they complain about."

Advertising

During the discussion of advertising there was a recurring theme: manufacturers' literature falls short of its purpose; its usefulness is limited. "I get the impression sometimes that they feed us this stuff just to appease us," was one comment.

It is unwise ever to send out to your customers such manufacturers' literature without thoroughly familiarizing yourself with it, was the agreement. Most often, it should never go out alone, but only with supplemental material supplied by the wholesaler himself.

"Since much of this literature is to be included in catalogs," suggested one wholesaler, "why can't they avoid printing so close to the center; when this is in the catalog, it is almost impossible to read the stuff which is in a gutter of sorts."

Another complaint: The manufacturers' literature has the company name and address in big bold print, but leaves no space for the wholesaler's name, unless he overprints somewhere.

Feedback between the panel and the audience was so rapid that individual statements were unidentifiable, but the major points made were these:

1) The wholesaler must establish his image in the community, with his customers. It might be a good idea to aim direct mail at his suppliers, too, to keep them aware of his image.

2) Direct mail is definitely the most effective way for the wholesaler to advertise. Use it frequently, monthly or weekly. Spotlight only one item at a time; don't overwhelm customers with reams of material.

3) Advertising takes the place of a salesman. Instead of figuring advertising budget as a percentage of sales, think of it in terms of another salesman.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications $10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

SALES ENGINEER—Family man, now connected with major manufacturer of heating and air conditioning products. Residential, commercial, light industrial. Technical training plus 10 years in air conditioning and refrigeration sales and service. Member of ASHRAE, would like position as sales representative with manufacturer with future possibilities. U.S.A. or International. BOX A6725, Air Conditioning, Heating & Refrigeration News.

SALES ENGINEER for one of the major manufacturers of air conditioning and heating equipment desires greater income and advancement opportunity. The international market is particularly interesting. Present and past responsibilities include residential, commercial and room air conditioning. BOX A6726, Air Conditioning, Heating & Refrigeration News.

POSITIONS AVAILABLE

AMMONIA REFRIGERATION journeyman for established ammonia refrigeration contractor. Man to be capable of responsibility on installation jobs. U.A. wages and conditions, work in central California. Write to: REFRIGERATION & AIR CONDITIONING CONTRACTORS ASSOCIATION, 1521 T Street, Sacramento 14, California. Give details of experience and training.

SERVICE ENGINEER — Experienced — refrigeration — heating — air conditioning — rebuild compressors all sizes Freon and ammonia. Rate commensurate with ability. Fast growing company central New York State. Write complete resume BOX A6727, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT WANTED

CASH FOR Tecumseh compressors S 7R16, S 7N16, JE 300, FB 500, and other models. Advise B/M, electrical accessories, quantity, price. BOX A6722, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT FOR SALE

NOTICE: DISTRIBUTORS, dealers, servicemen, users refrigeration equipment—repair parts available all models Baker ammonia and Freon compressors. Also models 6B and F6B ammonia compressors. We are exclusive Baker export sales office. Manufacturers' export agents refrigeration, air conditioning and allied equipment. THE KEISER COMPANY, 1555 W. 79th St., Chicago 20, Illinois.

BRAND NEW icemaker pump motor and impeller repair kits for Scotsman Carrier $18.00 at Kesco wholesalers coast to coast. Bronze replacement icemaker pumps for York Carrier $29.95. Hose connection adaptors for York Carrier $1.00. Complete line condensate pumps from 10' to 50' head, 115-208-230 volts. Catalog. KESCO, Jamaica 13, N. Y.

100 CONDENSING units, ¼ to 1 h.p. Open type, less motors. Up to 50% discounts from regular dealer's costs. We are sacrificing these due to a change in our designs. Good well known makes. Subject to prior sale. Write for list. MIDDLETON MFG. CO., 2627 McGee Trafficway, Kansas City 8, Missouri.

ATTENTION REFRIGERATION Servicemen. Send for catalog listing values in refrigeration and air conditioning parts, relays, capacitors, compressors. Savings up to 50%. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

BUSINESS OPPORTUNITIES

WANTED—DEALERS, agents and distributors to carry our newly developed window type air conditioner covers. It is no longer necessary to carry 99 different sizes. Our "storm" cover is made from a heavy gauge rubber plastic and will fit any make air conditioner up to 1 ton, secured with two heavy straps and buckles. Simple to install. Send $2.50 for sample. STORM PRODUCTS, 41 Greenwich St., Hempstead, L.I., New York.

DESIRABLE COMMERCIAL refrigeration, sales & service, business in North Central Florida. Two employees and serviceman owner at present. Very good opportunity for expansion. Desirable franchises, etc. For information and terms write BOX A6712, Air Conditioning, Heating & Refrigeration News.

REPRESENTING 25-YEAR MEMBER COMPANIES OF ARW, these men were given special recognition at the annual convention of the Air Conditioning & Refrigeration Wholesalers Association. (Also given recognition were firms who have been members for 20, 15, and 10 years.) Seated (l. to r.) E. P. Sorensen, Airo Supply Co.; Martin J. Trautman, Refrigeration Supply Co., Inc.; John Blair, Williams & Co.; Theodore Yecies, Tesco Distributors, Inc.; E. L. Bengston, Republic Refrigeration Wholesalers; R. H. Spangler & Co., Inc.; Frank Meyer, Jr., C. P. Payson Co.; S. Nill Mohler, Jr., R. E. Thompson Supply Co. Standing (l. to r.) I. J. Fajans, Aetna Supply Co.; W. J. Hieber, Refrigerative Supply, Inc.; A. H. Holcombe, Victor Sales & Supply Co.; Paul E. Lawrence, F. H. Langsenkamp Co.; Carl S. Ruegg, Ruegg Supply Co.; E. M. Gresham, The Heat & Power Engineering Co.; Frank Pond, Refrigeration & Industrial Supply Co., Inc.; John Sheperdson, Standard Supply, Inc.; Bill Wilder, A. E. Borden Co., Inc.; Phillip Taylor, C. P. Payson Co., Inc.; Iddo W. Lampton and W. C. Reeves, Enochs Sales Co.; in attendance but not in the picture, Walter Booth, Refrigeration Supply Co.

control, direct mail, reports like year-to-date sales and commissions.

Estimated minimum expense for automatic accounting is $500 per month.

August Knez, Fred C. Kramer Co., Chicago, pays about $1,000 monthly for his equipment, "about $600 for equipment and $400 for reports." It took Knez 18 months to get his equipment doing what it should, but he is very happy. "One thing about automatic accounting; it forces you to organize your business."

Paul Shapiro, Superior Supply Co., Kansas City, Mo., found he needed a perpetual inventory and is considering automatic accounting equipment. It will take a full time operator; the operation, he finds on investigation, is time consuming; "You don't get information as fast as you might expect." But he will probably try IBM.

Mention was made of the increasing number of service bureaus around the country—places where even small companies may get automatic accounting just by paying for the time they use on the machines.

Thom Muir cited information that indicated that companies doing only $100,000 annually can afford automatic accounting; rebuttal came that recent *Wall Street Journal* articles state that some of the giant oil companies are dropping it.

Knez impressed everyone with the flat statement that he was able to reduce his inventory by 33% after one year of automated accounting because the information the equipment gave him showed him items he was stocking incorrectly.

HONORED WITH A PLAQUE at the ARW convention was Air Conditioning, Heating & Refrigeration News, the presentation being made by incoming President E. P. Sorensen to Editorial Director Phil Redeker. In the presentation it was stated: "A live and ambitious industry must have the interest and support of a live and active trade press. Last year ARW embarked on a 'new look' program. We felt this program was of value to the industry as well as ourselves. Through the cooperation of the News, just about every member of the industry learned of our activities. All ARW members are deeply appreciative of this effort."

4) Most wholesalers don't budget for advertising; they operate by "feel."

5) Outside mailing firm is cheaper way to handle direct mail. Opposed: it's more efficient to do it within the wholesaler's establishment.

6) One problem of growth is that the owner loses contact with his old customer-friends. "The salesmen come to control the business." Solution: Find some way to keep in contact—direct mail, occasional letters, pricing schedules sent out periodically.

7) Do not send direct mail to the customer's home. Properly, he resents this. In a small company send it to the company. In a larger company send it to the company, attention some individual.

8) Advertising for branch offices is most efficiently handled by the main office.

Automated Accounting

Paradoxically, the greatest interest was generated by the discussion of automated accounting. Paradox because a show of hands showed only some five or six of the 200 present have such equipment, and only three or four more are even considering it.

The panel was rather evenly divided over the merits of automated accounting. Paul E. Williams of F. H. Langsenkamp Co., Indianapolis, is now in his second year of experience with IBM equipment. After one year of experience, the company decided it was not getting enough information from the equipment so they set up 60 different product classifications. Now they can get gross sales, gross profit, year-to-date sales, and a sales summary by territory.

Williams has his reservations about the benefits of automatic accounting, nevertheless. "I don't think one can afford these procedures unless he is operating a multi-branch operation. There are hidden costs in getting going that you just aren't aware of when you start: coding, changing of address plates, and such items can take months."

At the other extreme was Paul Fleck, Fleck Bros. Co., Camden, N. J., who pays $720 a month for his equipment and is very happy with it. He's had it for three years and it handles billing, accounts receivables, statements, invoices, inventory

YOU CAN DEPEND ON LARKIN
a comprehensive, quality line--
engineered for efficient performance,
carefully built for long life,
designed for easy servicing.
LOW TEMPERATURE HUMI-TEMP HOT GAS OR ELECTRIC AUTOMATIC DEFROST
STANDARD HUMI-TEMP
MULLION HUMI-TEMP STANDARD OR LOW TEMPERATURE WITH HOT GAS DEFROST
WALL HUMI-TEMP UNITS STANDARD OR LOW TEMPERATURE WITH HOT GAS DEFROST
BANTAM HUMI-TEMP
LOW-CEILING HUMI-TEMP
HALF TURRET OR TURRET HUMI-TEMP
HEAT EXCHANGERS
BAFFLE COOLER COILS
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WATER SAVER COOLING TOWERS
AIR CONDITIONING UNITS
AIR CONDITIONING COILS
see your wholesaler for full details
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P.O. Box 1699, Atlanta 1, Georgia
MUrray 8-3171
Area Code 404

ASHRAE Research Setup--

(Continued from Page 1, Col. 5)

"The ASHRAE long-range planning committee had no intention of closing the laboratory when it began its study," Tull said.

He also emphasized that "this was not a hurried decision," and he further disclosed that the board of directors voted unanimously to close the laboratory and that there was only one dissenting vote on the decision to close it immediately.

"If there had been any considerable division of the board on this question, we would have had a vote of the membership," Tull declared.

At a press conference Tull revealed that the society plans to expand its activity in the area of environmental studies, and at present is sponsoring 12 varied research projects at nine colleges.

First official recognition by the society that not all members agreed with the board's vote to close the laboratory (as disclosed in the Jan. 9 NEWS) came at the opening of the semi-annual meeting when retiring President Walter Grant told the assembly that petitions regarding the laboratory closing could be found "at the back of the room."

Open discussion of the question came up at a symposium where heads of the Research and Technical committee and the laboratory director outlined the society's plans for future research while deploring the board's decision to close the laboratory, and several members speaking from the floor sharply outlined the wisdom of this action.

At the research symposium Prof. B. H. Jennings, director of the ASHRAE laboratory, commented that "by mid-spring most experimental work will be completed, and by the end of June we will have brought to an end a program of more than four decades" in explaining how the society plans to "phase out" its various projects at the laboratory.

"I believe it is only wishful thinking to expect comparable work to be done under the new program by other laboratories," Jennings also emphasized.

Outlining research plans for the immediate future, E. P. Palmatier, general chairman of the society's research and technical committees, said that present thinking calls for a $200,000 a year cooperative research program.

Of this sum, he explained, $30,000 will come from membership funds, $70,000 from exposition fees, and $100,000 from industry for specific "applied research."

Considerable reorganization of the society's research committees is also contemplated, according to Palmatier.

Pointing out that there is "no intention to weaken the society's research program," Dr. N. B. Hutcheon, general vice chairman, indicated that research projects of the future will obviously represent a compromise as to choice, cooperation of laboratories, and financing.

Role of cooperative research agencies was described at the symposium by Dr. R. G. Nevins of Kansas State college, R. Q. Wilson of Battelle Memorial Institute, and Paul R. Achenbach of National Bureau of Standards.

More details of the research symposium and other events will be described in future issues of the NEWS. There were four regular technical sessions; symposiums on frozen food handling, medium temperature water heating, air conditioning, domestic refrigerator engineering, ventilation, and research, and six forums.

A record registration of 3,319 was announced at the close of the meeting.

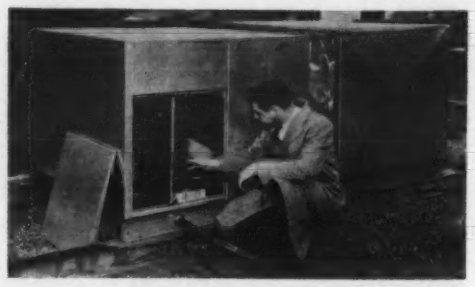
Installation of the society's new officers took place at the banquet Tuesday evening, Feb. 14. R. H. Tull is the new president; John Everetts, Jr. is now first vice president, John H. Fox is the new second vice president, and John E. Dube succeeds himself as treasurer.

It was announced by Tull that this summer ASHRAE will be one of 19 engineering groups moving their headquarters to the new United Engineering Center now nearing completion at United Nations Plaza, New York City.

Set Columbus Meeting On Silver Shield

COLUMBUS, Ohio—The National Warm Air Heating & Air Conditioning Association's Silver Shield Program will be detailed for area dealer-contractors at a meeting set for Thursday evening, March 2, in the auditorium of Ohio Fuel Gas Co. here.

Cooperating with NWAHACA is a Columbus Silver Shield Action Committee.



CURTIS ROOF-TOP cooling unit in 7½ and 10-ton sizes requires only one opening through the roof for combination supply and return air duct.

Curtis--

(Continued from Page 1, Col. 1)

sions of the complete 7½-ton unit are 139⅜ in. long, 52 in. wide, and 44⅛ in. high. The 10-ton model measures 151⅛ in. long, 60 in. wide, and 44½ in. high.

"The roof-top system requires only one opening through the roof for combination supply and return air duct," the company pointed out. "No other ductwork or refrigeration piping is required. With roof-top location, valuable floor area is gained.

"The packaged unit is enclosed in a weatherproof housing of heavy gauge embossed aluminum sheet. Exterior painting is not required."

Curtis, manufacturer of compressors, condenser units, packaged air conditioners, liquid chilling units, and other refrigeration equipment, will market the new roof-top heating and cooling units through national and international mechanical contractor and dealer outlets.

THE McQuay Hot Rod electric defrost unit cooler system is safe, dependable and exceptionally simple and foolproof in its construction and operation. It is but one of several automatic defrost systems offered by McQuay.

Hot Rod unit coolers all have casings of hammered aluminum, and are equipped with built-in heat exchangers. They, of course, feature the famous McQuay coil construction. Aluminum drain pans are heated for positive de-icing, and all electric elements are accessible and easily removable without disturbing the coil or drain pan.

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